

# The Influence of the Legal Environment on the Post-Takeover Value of a Firm

*Alexei V. Motlokhov*



Thesis for the two-year Master's Degree in Environmental and  
Development Economics  
Department of Economics, University of Oslo

05.05.2006

## Preface

To begin with, I would like to thank everybody who helped me in writing this thesis.

First and foremost I would like to thank my supervisor Ibolya Schindele. She has been very helpful beyond the call of duty and I would not have been able to complete this thesis without her help. Professor Schindele gave me great insight and guidance all the way to the final step.

I would also like to thank Associate Professor and Head of the Master Thesis Committee Hilde Bojer for her help in finding a supervisor. Professor Tore Nilssen, with his absolutely fantastic lectures in *Economics of The Firm* at the University of Oslo, provided me with valuable insight and helped to define the scope of my research. I would also like to thank the other academic staff in the Department of Economics for helping with the finding of the literature and inspiration in the very early stages of writing this thesis, as well as the librarians at the University of Oslo.

Thanks to my mother and father, Irina Motlokhova and Vladimir Motlokhov. Not only have they been very helpful on this last part of my voyage towards a finished master thesis, they have also been very helpful and supportive of my entire education from the very beginning to a finished master of economics degree. Thank you very much for believing in me, I could not have done this without you.

Absolutely priceless help was given to me by my sister Marina Honig and my brother-in-law Marc Honig. Their constant support and great help in all stages of writing this thesis will never be forgotten. And, of course, my adorable nephew, Zachary Honig, who provides me with the inspiration to make this world a little bit better.

I would also like to thank Alexander Ugryumov, my good friend, for his creative input and our interesting discussions.

Last but not least, I would love to thank Niveditha Rajadevan and Ricardo Duque, my great buddies here in Oslo, Norway, for great editorial help and for keeping me up. Unfortunately, I cannot mention all the board members of ISU Oslo.

All errors are the responsibility of the author.

Alexei Motlokhov

03.05.2006

## **Abstract**

This thesis aims to analyze the influence of the legal environment on the post-takeover value of a firm. The idea behind this thesis stems from the large number of discussions concerning the future of the European corporate governance system and the direction its development is taking. In this thesis the following issues were formalized and analyzed: the existing differences between the two major corporate governance systems of the U.S. and the European Union (EU); and secondly constructed a formal model to demonstrate the influence of legal parameters on the post-takeover value of a firm. I construct a new model based on the one introduced by Burkart, Gromb and Panunzi (2005). This model formalizes, in the author's opinion, three key differences between the two major systems of corporate governance: the possibility of implementing defensive strategies, the effect of the size of the toehold and the influence of majority blockholders.

## Table of Contents

Introduction.....	5
Section 1: Theory .....	9
Section 1.1: Takeovers.....	9
Section 1.2: Ex-post efficiency .....	12
Section 1.3: Ex-ante efficiency .....	13
Section 1.3: Optimal takeover issues .....	14
Section 1.4: Large shareholders.....	18
Section 1.5: Toeholds.....	22
Section 2: Institutional differences .....	24
Section 2.1: Comparative corporate governance: The USA and The EU.....	24
Section 2.1.1: Ownership Structure .....	25
Section 2.1.2: Capital Structure and Capital Requirements.....	27
Section 2.1.3: Role of Financial Institutions.....	27
Section 2.1.4: Incorporation.....	28
Section 2.1.5: Takeover Barriers and Defensive Strategies.....	29
Section 2.2: Diversity in European Union Member States' Laws .....	31
Section 3: The Model.....	35
Section 3.1: Basic Model .....	36
Section 3.2: New Parameters .....	42
Section 3.2.1: Defensive Strategies .....	43
Section 3.2.2: Large Shareholder.....	45
Section 3.2.3: Toehold .....	48
Section 3.3: Joint effect of the parameters.....	54
Conclusion .....	58
References.....	60
Appendix 1 .....	69

---

## Introduction

Since 1980 the number of mergers and takeovers has easily exceeded 10000 deals per annum. The money involved in this business is very big. According to the latest valuation of the market for corporate control, the total sum of all takeover transactions exceeds \$1 trillion globally. Never in modern history has this large a number ever been seen. And taking into account the influence that this brings to the development of economies, it is - in general - not possible to ignore the importance of the systems of corporate governance which regulate mergers and takeovers.

Takeovers constitute a great part of modern economic reality, and in recent times they have become one of the most significant indicators of economic health. Takeovers allow the removal of managers who are not acting in the shareholders' best interest. As such, they are considered an important check on managers of large public corporations; the mere threat of a takeover disciplines managers. However, the study of the theoretical foundations of takeovers and their effectiveness as a disciplinary mechanism has been questioned on a variety of different grounds, such as agency problems within the acquiring firm or expropriation of the target firm's stakeholders. Grossman and Hart (1980) and Bradley (1980) show that despite the threat of a takeover, managers who pursue self-serving actions, in the situation where ownership is widely dispersed, need not be vulnerable to the disciplinary threat of a takeover. Being too small to affect the outcome, each shareholder tenders only if the bid price at least matches the post-takeover share value. The only way for the acquirer to succeed in the face of this free-rider problem is to offer a price so high that he does not earn a profit. Consequently, he has no incentive to launch a bid, and inefficient managers face no risk of being ousted.

Essentially therefore, the outcome and possible success of any takeover attempt is dependent upon the legal environment regulating any takeover bid. Given that the legal environment is determined by the corporate governance system in place, there are several

---

academic works and many ongoing discussions as to what constitutes the better system of corporate governance.

There are two polar systems of corporate governance: the market-based system and the blockholder-based system. The former system prevails in the United Kingdom (U.K.), the United States (U.S.) and the Commonwealth countries, whilst Continental Europe is largely governed by the latter. Essentially the two systems differ not only in terms of the rationale behind their legal rules, but also in terms of their ownership and control. Regarding legality, the market-based system relies on legal rules largely resulting from case law and on the effective legal enforcement of shareholder rights. Conversely the blockholder-based system of Continental Europe relies on codified law and emphasizes rules protecting stakeholders such as creditors and employees. Regarding ownership and control, most Continental European companies are characterized by majority or near-majority stakes held by one or few investors; whilst in contrast, the Anglo-American system is characterized by dispersed equity. In recent times the increase in economic globalization as well the move in Europe to decrease the influence of state boundaries has fuelled the debate as to what constitutes the better system of corporate governance (McCahery (2002)).

This thesis aims to analyze the influence of the legal environment on the post-takeover value of a firm. The idea behind this thesis stems from the large number of discussions concerning the future of the European corporate governance system and the direction its development is taking. Whether it is going to be like the U.S. system or the German corporate governance system or will it be something new; a hybrid. Regarding the structure of this thesis, the idea was to first formalize and analyze the existing differences between the two major corporate governance systems of the U.S. and the European Union (EU); and secondly to construct a formal model to demonstrate the influence of legal parameters on the post-takeover value of a firm.

I construct a new model based on the one introduced by Burkart, Gromb and Panunzi (2005). This model formalizes, in the author's opinion, three key differences between the

---

two major systems of corporate governance: the possibility of implementing defensive strategies, the effect of the size of the toehold and the influence of majority blockholders.

In part 1 of this thesis, I review the necessary theoretical background. In addressing the importance of takeovers (Section 1.1) I look at the situation of the market for corporate control. Further examination of the development of the theories concerning takeovers was necessary within this section in order to complete my analysis. In Section 1.2 I review both the pioneering theory of Grossman and Hart (1980) and the issue of ex-post efficiency in general. Section 1.3 then looks at ex-ante efficiency, concentrating mainly upon the disciplinary role of takeovers. I then briefly review the theoretical issues regarding optimal takeovers and how these issues might be resolved. Section 1.4 discusses blockholders and their effect on the outcome of a takeover; whilst the importance of toehold strategies is discussed in Section 1.5. After looking at these different theories, I conclude by reviewing the institutional differences between the U.S. and the EU.

Section 2.1 analyzes the general differences in the corporate governance systems of the U.S. and the EU. The more distinctive features of ownership structures are discussed in Section 2.1.1. Further analysis dealing with capital structure and capital requirements that are used in the U.S. and Europe, is done within Section 2.1.2. In Section 2.1.3 I talk about the different roles of financial institutions within these two systems. Section 2.1.4 deals with the question of incorporation; a table is presented demonstrating the major differences. The discussion of takeover barriers and defensive strategies is held in Section 2.1.5. In Section 2.2, I then concentrate on reviewing the diversity of the European Union member state's laws in an attempt to look at the degree of harmonization in the united Europe and to single out the commonalities between countries.

In the next part, Section 3, I concentrate on analyzing two models. In Section 3.1 the Burkant, Gromb and Panunzi model is analyzed. Presented are the main features and results of this model. I then introduce three new parameters to this model in Section 3.2. These are the probability of the implementation of a defensive strategy and the benefits of

---

such an implementation (3.2.1), the effect of the presence of a large shareholder (3.2.2) and the possibility of the use of toehold strategies (buying shares on the open market) (3.2.3). Included in each section is an analysis of the effect that each parameter has on the model, thus showing the consequences of these regulatory tools. The last Section, 3.3, analyzes the full model, including all the parameters. Basically the author argues that in the case of a minority blockholder - his presence as well as the possibility shareholders have to implement defensive strategies - increases the post-takeover value of a firm, whilst simultaneously decreasing the probability of a takeover. However, toeholds give rivals more incentives to bid. Conversely in the case of a majority blockholder everything is dependent upon his valuation of his shares. Of course, defensive strategies increase his value but toeholds play no role here. And takeover probability is the lowest in this case.



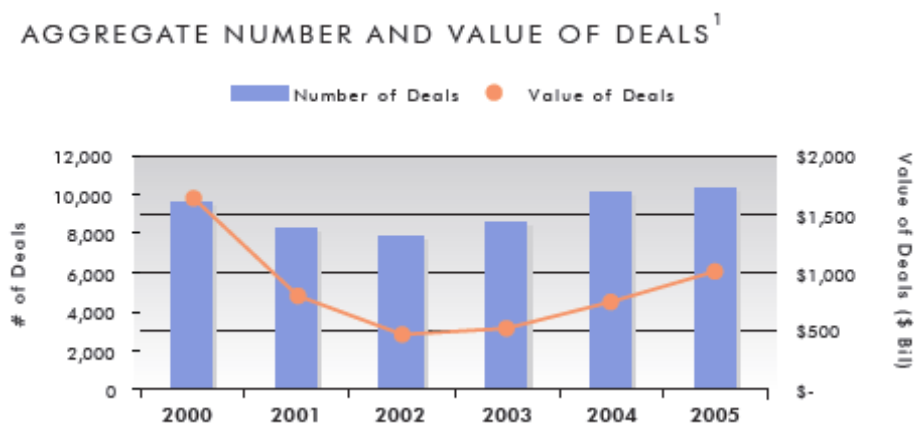
## Section 1: Theory

### Section 1.1: Takeovers

Economic analysis and evidence indicate that the market for corporate control is ultimately benefiting shareholders, society and the corporate form of organization. But the takeover wave in the U.S. in the 1980s and in Europe in the 1990s, together with the recent merger wave, has simultaneously fuelled public debate on corporate governance. In Continental Europe, the sleepy corporate world has been spectacularly shaken by the fact that a significant proportion of these deals have largely involved newly privatized giants and by the apparent lack of opposition to these mergers and takeovers by the social democratic administrations in place at the time. One remarkable example of these recent takeover deals is the successful \$199 billion cross-border hostile bid of Vodafone for Mannesmann in 2000; the largest ever to take place in Europe<sup>1</sup>. Understandably, these high profile cases have moved takeover regulation of domestic and cross-border deals in the European Union to the top of the political agenda.

According to an FTI Capital Advisors, LLC. report in 2005, the value of announced Mergers and Acquisitions (M&A) transactions globally exceeded \$1 trillion for the first time since 2000<sup>2</sup>.

Figure 1: Aggregate Number and Value of Deals(FTI Capital Advisors, LLC.( 2005))



<sup>1</sup> The other notable examples are the recent hostile takeovers in Italy: Olivetti for Telecom Italia; Generali for INA and in France: BNP-Paribas; Elf Aquitaine for Total Fina.

<sup>2</sup> In addition, the 10,369 announced transactions was the highest ever annual total, just eclipsing the prior record set in 2004. The market continues to be driven by accommodating debt markets, low interest rates and competition among cash rich strategic and financial buyers pursuing transactions at all size levels.

Further driving the increase in deal value is the ongoing strength in M&A activity at the \$1 billion-plus level<sup>3</sup>. This became a trend not only for the highly valued corporation's market, but also for the middle market<sup>4</sup>, as was especially seen in 2005<sup>5</sup>. Activity also increased for even smaller transactions<sup>6</sup>.

Figure 2: Number and Value of M&A Deals by Size (FTI Capital Advisors, LLC. (2005))

NUMBER AND VALUE OF DEALS BY SIZE <sup>1</sup>						
Deal Size	Number			Value (\$ Bil)		
	12 Months Ended			12 Months Ended		
	12/31/05	12/31/04	Change	12/31/05	12/31/04	Change
\$1 Billion +	171	135	27%	\$695.5	\$468.2	49%
\$500M to \$999.9M	152	121	26%	106.4	82.8	29%
\$250M to \$499.9M	233	211	10%	81.5	72.7	12%
\$100M to \$249.9M	415	398	4%	65.7	63.5	3%
\$50M to \$99.9M	445	390	14%	31.2	27.4	14%
\$25M to \$49.9M	515	497	4%	18.0	17.8	1%
\$10M to \$24.9M	672	594	13%	10.9	9.6	14%
Under \$10M	1,079	1,038	4%	4.4	4.3	2%
Value Not Disclosed	6,687	6,755	(1%)	NA	NA	NA
Total	10,369	10,139	2%	1,013.6	746.3	36%
\$25M to \$249.9M	1,375	1,285	7%	\$114.9	\$108.7	6%

The number of transactions, however, varies by economic sector<sup>7</sup>. Understandably, this is driven by both the economics situations and the legal environments in different parts of the world. The process of globalization touches even the corporate government system.

<sup>3</sup> Top transactions in this category included Procter & Gamble's \$57.9 billion acquisition of Gillette, ConocoPhillips' \$34.8 billion acquisition of Burlington Resources, and Bank of America's \$34.4 billion acquisition of MBNA.

<sup>4</sup> Defined as transactions of \$25-\$250 million in value.

<sup>5</sup> These two markets are growing with the number and value of transactions increasing 7% and 6% respectively over the previous year.

<sup>6</sup> Defined as transactions of \$10-25 million in value. Number and value of transactions are growing 13% and 14%, respectively over the previous year.

<sup>7</sup> In terms of number of transactions, sectors leading the surge in M&A in 2005 included computer software, supplies & services, and miscellaneous services. Top deals in the computer sector included Oracle/Siebel Systems (\$5.6 billion), Adobe Systems/Macromedia (\$3.6 billion), InterActiveCorp/Ask Jeeves (\$1.9 billion) and the \$10.4 billion tender offer for SunGard Data Systems led by a consortium of private equity groups including Silver Lake Partners, Bain Capital, Blackstone Group and KKR. In the services sector, notable transactions included the \$22 billion buyout of Hertz Corp. by Carlyle Group, Clayton Dubilier & Rice and Merrill Lynch Global Private Equity, and the \$1.1 billion buyout of DoubleClick by Hellman & Friedman. In terms of aggregate transaction value, the banking & finance and oil & gas sectors were the most active.

---

Taking into consideration the importance of the market of corporate control it is impossible not to notice the influence of takeovers on the financial sector, social sector and the development of corporate governance.

All these facts highlight two important questions –How does the legal framework influence the takeover process? And what sort of consequences does the legal framework have for the value of transactions and therefore for shareholders?

In order to facilitate an approach to these questions the author has decided to give the reader some insight to the development of the theory behind mergers and takeovers.

Takeovers are used as a radical mechanism for replacing and sometimes disciplining managers. The principle of a hostile (unfriendly/unwanted) takeover is quite simple: the raider makes an offer to buy all or a fraction of outstanding shares at a stated tender price. The takeover is successful if the raider gains more than 50% of the voting shares and thereby obtains effective control of the company. With more than 50% of the voting shares, in due course he will be able to gain majority representation on the board and thus be able to appoint the CEO. However, the mechanism of a takeover is highly disruptive and costly. Even in the biggest economy in the world, the U.S., hostile takeovers are rarely used as a mechanism to substitute management. In most other countries they are almost nonexistent.

Despite their rarity, hostile takeovers have received a great deal of attention from academic researchers. Much research has been devoted to the mechanics of the takeover process, the analysis of potentially complex strategies for the raider and individual shareholders, and to the question of ex-post efficiency<sup>8</sup> of the outcome. Much less research has been concerned with the ex-ante efficiency of hostile takeovers and effect of blockholders as minority and majority shareholders. And even less research has dealt with the impact of different regulatory tools on the outcome of takeovers. In the

---

<sup>8</sup> With respect to hostile takeovers the term ex-post efficiency refers to the analysis of the outcome of a takeover, once the takeover has actually occurred.

following sections I will give some insight to the reader about a variety of these takeover issues that have previously been given attention.

## ***Section 1.2: Ex-post efficiency***

One can find a large amount of literature devoted to the issue of ex-post efficiency of hostile takeovers. The classical formal model of a tender offer game is attributed to Grossman and Hart (1980). They consider the following basic game. A raider can raise the value per share from  $v = 0$  under current management to  $v = 1$ . He needs 50% of the voting shares and makes a conditional tender offer of  $p$  per share<sup>9</sup>. Share ownership is completely dispersed amongst an infinite number of shareholders. The result is almost obvious - a dominant strategy for each shareholder is to tender if  $p \geq 1$  and to hold on to their shares if  $p < 1$ . Therefore the lowest price at which the raider is able to take over the firm is  $p = 1$ , the post-takeover value per share. Simply, the raider has to give up all the value he can generate to existing shareholders. If he incurs costs in making the offer or in undertaking the management changes that produce the higher value per share he may well be discouraged from attempting a takeover. In other words, there may be too few takeover attempts ex-post.

Several ways were suggested by Grossman and Hart (1980) to improve the efficiency of the hostile takeover mechanism. All involve some dilution of minority shareholder rights. Consistent with their proposals, for example, is the idea that raiders be allowed to “squeeze (freeze) out”<sup>10</sup> minority shareholders that have not tendered their shares, or to allow raiders to build up a larger “toehold”<sup>11</sup> before they are required to disclose their stake.

---

<sup>9</sup> See Appendix 1

<sup>10</sup> A squeeze or freeze out forces minority shareholders to sell their shares to the raider at (or below) the tender offer price. When the raider has this right it is no longer a dominant strategy to hold on to one's shares when  $p < 1$ .

<sup>11</sup> A toehold is the stake owned by the raider before he makes a tender offer. In the U.S. a shareholder owning more than 5% of the outstanding shares of a firm must disclose his stake to the SEC. The raider can always make a profit on his toehold by taking over the firm. Thus the larger his toehold the more likely he is to make a takeover attempt. See Shleifer and Vishny (1986).

A large amount of literature has followed the publication of the Grossman and Hart article attempting to develop different variants of the takeover game; with non-atomistic share ownership (Holmström and Nalebuff (1990)), with multiple bidders (Burkart (1995), Bulow, Huang and Klemperer (1999)), with multiple rounds of bidding (Dewatripont, (1993)), with arbitrageurs and asymmetric information (Hirshleifer and Titman (1990)). Many of the results found Grossman and Hart's conclusion, that most of the gains of a takeover go to target shareholders (because of "freeriding" by small shareholders), to be non-robust when there is only one bidder. Grossman and Hart's extreme "freeriding" result breaks down with either non-atomistic shareholders or asymmetric information. Empirical studies have repeatedly found that all the gains from hostile takeovers go, on average, to target shareholders (Jensen and Ruback (1983), and Burkart and Panunzi (2000)).

At this point it is worth noting that economists differ upon two closely related criteria. The first is ex-post efficiency (as discussed above) and the second is ex-ante efficiency<sup>12</sup>.

### ***Section 1.3: Ex-ante efficiency***

Scharfstein (1988) gives a formal analysis of the issue of ex-ante efficiency. His work is based on the classical insights of Grossman and Hart (1980). Scharfstein considers the ex-ante financial contracting problem between a financier and a manager. He presents a theory of the disciplinary role of takeovers based on an explicit model of managerial incentive problems stemming from asymmetric information. Scharfstein argues that an informed raider can reduce incentive problems by making managerial compensation more sensitive to the information available to shareholders. In this sort of contract compensation scheme, the manager is induced to make an optimal effort provision. But it must be said that this contract also allows for ex-post takeovers, which can be efficiency enhancing if the raider either has information about the state of nature not available to the financier or if the raider is a better manager. Thus takeovers can be seen to be useful both because they reduce the informational monopoly of the incumbent manager about the

---

<sup>12</sup> In the context of takeovers ex-ante efficiency is defined as the analysis of the outcome of takeover prior to the actual takeover occurrence. Thus they allow us to understand the extent to which takeovers are an effective disciplining device on managers.

state of the firm and because they allow for the replacement of inefficient managers. Scharfstein also made another important observation: even if the firm can commit to an ex-ante optimal contract, this contract is generally inefficient. This is basically because the financier and manager partly design the contract to extract the efficiency rents of future raiders. As a result the “price” of the acquisition will be set above the efficient competitive price, and as a consequence, the contract will induce too few hostile takeovers on average.

Scharfstein’s observations provide an important justification for regulatory intervention limiting anti-takeover defenses, such as super-majority amendments<sup>13</sup>, staggered boards<sup>14</sup>, fair price amendments<sup>15</sup>, and poison pills<sup>16</sup>. These defenses can be seen to be against shareholders’ interests and to be implemented by managers of companies with weak corporate governance structures (Gilson (1981)). However, these defensive mechanisms can also be seen to be an important weapon, making it possible for the target firm to extract better terms from a raider (Shleifer and Vishny (1986), Hirshleifer and Titman (1990), and Hirshleifer (1995)). But the crux of Scharfstein’s argument suggests that some of these defenses should be regulated or banned.

### ***Section 1.3: Optimal takeover issues***

The question of rational regulation has been and continuous to be very important. Both scholars and government regulators have focused their attention on this question. In academic literature there are usually four issues that are discussed in a formal analysis of optimal takeovers: 1) whether deviations from a “one-share-one vote” rule result in inefficient takeover outcomes; 2) whether raiders should be required to buy out minority shareholders; 3) whether takeovers may result in the partial expropriation of other inadequately protected claims on the corporation, and if so, whether some anti-takeover amendments may be justified as basic protections against expropriation; and 4) whether proxy contests should be favored over tender offers.

---

<sup>13</sup> See Appendix 1

<sup>14</sup> See Appendix 1

<sup>15</sup> See Appendix 1

<sup>16</sup> See Appendix 1

Many different approaches have been made to investigate the efficiency of the one-share-one-vote rule. One such experiment was held by the New York Stock Exchange from 1926 to 1986. It was required that every new listing on the New York Stock Exchange issue a single class of voting stock<sup>17</sup>. Companies could only issue shares with the same number (effectively one) of votes each. As suggested in the analysis of Grossman and Hart (1988) and Harris and Raviv (1988), this kind of regulation induces efficient corporate control contest. Under the one-share-one-vote rule rivals must pay the highest possible price to acquire control over the firm, this is even more important when the raider is inefficient. In other words, under this rule raiders face the greatest deterrent to taking over a firm. In addition, a simple majority rule is more likely to achieve efficiency by treating the incumbent management and the raider symmetrically.

However, initial shareholders may extract a greater share of the efficiency gain of the raider in a value-increasing takeover by deviating from the one-share-one-vote rule. Maximum extraction of the raider's efficiency rent can be obtained by issuing two extreme classes of shares, votes-only shares and non-voting shares (Harris and Raviv (1988), and Gromb (1997)). In this share ownership structure only shares with votes will be purchased by the raider. Thus, whilst a rival can gain control much more easily, all the benefits he brings goes to both the voting and non-voting shareholders. Therefore, when there is a two class share allocating scheme in use all non-voting shareholders have no choice but to free-ride and appropriate most of the gains from the takeover.

Family-owned firms are often reluctant to go public if in the process they risk losing control. Given that loss of control is likely in the situation of the one-share-one-vote rule, these firms generally benefit from any deviation from this rule. Retention of control is more likely through a dual-class share structure. Indeed, any deviation from one-share-one-vote rule to this structure would benefit both the company and the exchange (Hart (1988)); ultimately increasing the likelihood of family owned firms to go public. Burkart,

---

<sup>17</sup> The Ford Motor Company was the only exception from the listing rule. It was listed with a dual class stock capitalization in 1956, allowing the Ford family to exert 40% of the voting rights with 5.1% of the capital. See Seligman (1986).

---

Gromb and Panunzi (1998) extend the analysis of dual-class shares by introducing a post-takeover agency problem. Such a problem arises when the raider does not own 100% of the shares ex-post, and is potentially worsened when the raider's post-takeover stake is close to 50%. Burkart, Gromb and Panunzi show that in such a model initial shareholders extract the raider's whole efficiency rent under a "one-share-one-vote" rule. As a result, some costly takeovers may be deterred.

Regarding optimal takeover issues another mechanism exists, similar to other deviations from the one-share-one-vote rule, concerning whether raiders should be required to buy out minority shareholders. This mechanism is termed mandatory bid rules. Such a rule maximizes the price an inefficient raider must pay to acquire control. Maximization of the price is made by inducing a raider to buy all outstanding shares. As pointed out by Bergstrom, Hogfeldt and Molin (1997), one possible consequence of mandatory bid rules might be a decrease in the number of value increasing takeovers.

The third mentioned issue is whether anti-takeover amendments can be justified as a protection against expropriation. This issue formed a fundamental part of the research carried out by Shleifer and Summers (1988). The result obtained in their work states that some takeovers may be undesirable if they result in a "breach of trust" between management and employees. This is a widespread situation, especially in Europe where the majority of companies are owned by large shareholders possessing stakes greater than 50%. Therefore these large shareholders can control all the processes in the firm, and appoint loyal managers. If employees anticipate that informal relations with the current management may be broken by a new managerial team, they may be reluctant to invest in such relations and to acquire firm specific human capital. Therefore the argument is that anti-takeover protections may be justified at least for firms where specific (human and physical) capital is important. For example, Schnitzer (1995) shows that only a specific combination of a poison pill with a golden parachute<sup>18</sup> would provide adequate protection for the manager's (or employees') specific investments. However, the main

---

<sup>18</sup> See Appendix 1



difficulty from a regulatory perspective is that protection of specific human capital is not a justifiable excuse for managerial entrenchment<sup>19</sup>.

The last issue mentioned above is whether proxy fights should be favored over tender offers. Bebchuk and Hart (2001) propose that poison pills make it impossible to remove an incumbent manager through a hostile takeover unless the tender offer is accompanied by a proxy fight<sup>20, 21</sup> over the redemption of the poison pill. In other words, Bebchuk and Hart (2001) argue that the presence of a poison pill requires a mechanism for removing incumbent managers that combines both a tender offer and a proxy contest. In their model such a mechanism dominates both straight proxy contests and straight tender offers. The results hold for several reasons. First, a straight proxy contest is dominated by a mixed strategy because shareholders tend to be (rationally) skeptical of challengers, given that challengers may be worse than incumbents and only seek control to gain access to large private benefits of control. Second, a straight tender offer is dominated because a tender offer puts the decision in the hands of the marginal shareholder while majority voting effectively puts control of the decision in the hands of the average shareholder. Whilst the average shareholder always votes in favor of a value increasing control change, in a tender offer the marginal shareholder only decides to tender if he is better off tendering than holding on to her shares assuming that the takeover will succeed. Such behavior can result in excessive freeriding and inefficient control allocations. Hence, by applying the mechanism proposed by Bebchuk and Hart (2001) - whereby a tender offer and proxy contest should be combined as opposed to favoring one over the other - the free-rider problem is lessened.

---

<sup>19</sup> See Appendix 1

<sup>20</sup> See Appendix 1

<sup>21</sup> One memorable recent example of a proxy vote took place within Hewlett-Packard, when the management of that company sought to takeover Compaq. Opponents of the Compaq takeover lost the fight. The management, under Carly Fiorina (the former CEO of HP), remained in place, and the merger went ahead. Hewlett-Packard spent over \$100m. to convince shareholders to approve its merger with Compaq. In this case, it was alleged that the prospect of future corporate finance business was implicitly used to entice Deutsche Bank to vote for the merger.

---

### ***Section 1.4: Large shareholders***

Another issues requiring regulation and another approach to solving the free-rider problem is the concept of concentrated ownership structure. This structure should include at least one big shareholder, who has an interest in monitoring management and has the power to implement management changes. These sorts of ownership structures are less common in the U.S. and U.K., because of regulatory restrictions on blockholder actions, but are in use much more in Continental Europe and other economically developed countries, in particular Germany and the Scandinavian countries.

In the influential work of Grossman and Hart (1980) and the work of Shleifer and Vishny (1986), the first formal analyses of corporate governance with large shareholders was made. The authors focus their analyses on investigating the benefits of large shareholders in facilitating takeovers. The tradeoff between optimal risk diversification, which is obtained under a fully dispersed ownership structure, and optimal monitoring incentives, which require concentrated ownership, is the standard agency problem with moral hazard, which is a closely related theme. For example, it may be in the interest of a risk-averse entrepreneur who wants to go public to retain a large stake in the firm as a signal of quality, or as a commitment to manage the firm well. As shown by Admati, Pfleiderer and Zechner (1994), in equilibrium the large shareholder has too small a stake and under-invests in monitoring, because the large shareholder prefers to diversify his holdings somewhat even if this reduces his incentives to monitor. In the same research another result was obtained: ownership structures with one large block may be unstable if the blockholder can gradually erode his stake by selling small quantities of shares in the secondary market. This result was formally validated by Burkart, Gromb and Panunzi (2005). Admati, Pfleiderer and Zechner (1994) advise a solution for the main problem of these models, namely how to give more incentives to monitor to the blockholder. The solution involves the possibility of subsidizing of blockholders. They argue that this might improve the corporate governance.

Another aspect of the problem of giving the right incentives to the blockholder to monitor the firm is closely related to the liquidity of secondary markets. Hirschman (1970), in his

---

work, argues that blockholders cannot be relied upon to monitor management actively if they have the option to sell their stake instead. The idea is that blockholders would rather sell their stake in mismanaged firms than try to fix the management problem. This is known as the “Wall Street rule” (Black (1990)). As it has been argued by Mayer (1988), Coffee (1991), Roe (1994) and Bhidé (1993), it is precisely the highly liquid nature of U.S. secondary markets that makes it difficult to provide incentives to large shareholders to monitor management.

Kahn and Winton (1998) further show how market liquidity can undermine large shareholders’ incentives to monitor by giving them incentives to trade on private information rather than intervene. It was shown that for blue-chip companies, where the large shareholder is unlikely to have a significant informational advantage over other agents, incentives to speculate may be small. Maug (1998) obtained a very similar result. He also points out that in liquid markets it is easier to build a block. This gives large shareholders an added incentive to invest in information gathering.

However, there is an opposite perspective. A large investor may want to limit his stake to ensure minimum secondary market liquidity. This perspective was widely discussed in the works of Holmstrom and Tirole (1993). The commentators show that share prices in the secondary market provide valuable information about the firm’s performance. However, the secondary market must be sufficiently liquid to make it possible to obtain the correct information. Speculators’ return on acquiring information is also raised by liquidity. Furthermore, the informativeness of the secondary market price is also improved by liquidity and by an increase in the speculators’ return. To provide managers with more incentives, the more informative stock price can be included in the compensation package. In the Holmstrom and Tirole (1993) model the large shareholder is only there by default, because in selling to the secondary market he has to accept a discount reflecting the information-related trading costs that investors anticipate incurring. Thus, the large shareholder can achieve the desired amount of information acquisition in the market by adjusting the size of his stake.

---

Just as with takeovers, there are obvious benefits from large shareholder monitoring but there may also be costs. Takeovers might be undesirable if their main purpose is to expropriate employees or minority shareholders. Similarly, large shareholder monitoring can be too much of a good thing. If the large shareholder uses his power to hold up employees or managers, the latter may be discouraged from making costly firm specific investments. This point has been emphasized in a number of theoretical studies, most notably in Aghion and Tirole (1997) and Burkart, Gromb and Panunzi (1998). In order to prevent over-monitoring and ex-post opportunism a large shareholder's stake has to be limited in one way or another. Over-monitoring is often evident within private firms where concentrated ownership structures are often the norm. However, the majority of the theoretical literature on large shareholders tends to only consider ownership structures where all shareholders but one are small. However, Zwiebel (1995) considers ownership structures where there may be more than one large shareholder and also allows for alliances among small blockholders. In such a setting he shows that one of the roles of a large block holding is to fend off alliances of smaller blockholders that might compete for control.

The analyses of Aghion and Tirole (1997) and Burkart, Gromb and Panunzi (1998), however, suggest that if there is a risk of over-monitoring or self-dealing it is often possible to design the corporate ownership structure or charter to limit the power of the blockholder. Bebchuk (1999) retorts that although it is theoretically possible to design corporate charters that restrain self-dealing, in reality regulations limiting blockholder rights are called for. He develops a model where dispersed ownership is unstable when large shareholders can obtain rents through self-dealing since there is always an incentive to grab and protect control rents. If a large shareholder does not grab the control rents then management will. However, Bebchuk's extreme conclusion is based on the assumption that a self-dealing manager cannot be disciplined by a takeover threat, as well as on the assumption that dispersed ownership management may not be able to commit to an ex-ante efficient corporate governance rule. The issue of competition for control rents between a large shareholder and a manager is further analyzed in Burkart and Panunzi (2000). They argue that access to control rents has positive incentive effects on the

manager. It also has positive effects on the blockholder's incentive to monitor. However, competition for these rents between the manager and the blockholder may undermine the incentives of either party.

An important concern of many scholars is the conflict of interest among shareholders innate in blockholder ownership structures. This conflict is worsened when there is separation between voting rights and cash-flow rights, as is common in Continental Europe. Many have argued that such an arrangement is particularly vulnerable to self-dealing by the controlling shareholder (Zingales (1994), Burkart, Gromb and Panunzi (1998), La Porta (1998), and Bebchuk (1999)). Another issue in the principle-agent problem that involves large shareholders is collusion between management and the blockholder. This aspect of the problem has not received much attention (Tirole (1986), Burkart and Panunzi (2000) and Dessi (2005)). However, scholars that have analyzed this issue argue that existing blockholder structures in Continental Europe are in fact likely to be inefficient and that U.S.-style regulations restricting blockholder rights should be phased in.

Bolton and Von Thadden (1998) argue that one potential benefit of blockholder structures is that monitoring will take place on an ongoing basis; whilst the opposite system, with dispersed shareholders, can provide monitoring and intervention only in crisis situations, through a takeover. On the other hand, the benefit of dispersed ownership is the enhanced liquidity it provides within secondary markets. Obviously the legal environment plays a big role in choosing the best system of corporate governance to implement. If regulations substantially increase the costs of holding blocks then a system with dispersed shareholders relying on hostile takeovers may be best (Black (1990)). For example, one of the most striking restrictions on takeovers is the rule in the U.S. that regulates shareholder proposals (Rule 14a-8): a shareholder "can offer only one proposal per year, ... must submit the proposal ... 5 months before the next annual meeting .... A proposal cannot relate to ordinary business operations or the election of directors ... and not conflict with a manager proposal" (Black, 1990, p. 541)) (a similar rule is in place in the U.K.). However, if regulations are in place that mainly increase the costs of hostile

takeovers but do not restrict blockholder rights (as in Continental Europe), then a system based on blockholder monitoring may be used more successfully.

Another comparative analysis is proposed by John and Kedia (2000). They draw the distinction between ‘self-binding’ mechanisms (like bank or large shareholder monitoring) and ‘intervention’ mechanisms (like hostile takeovers). They let underlying conditions vary according to two parameters: the costs of bank monitoring and the effectiveness of hostile takeovers. Depending on the values of these parameters the optimal governance mechanism is either: i) concentrated ownership (when bank monitoring is costly and takeovers are not a threat), ii) bank monitoring (when monitoring costs are low and takeovers are ineffective), or iii) dispersed ownership and hostile takeovers (when anti-takeover defenses are low and monitoring is costly). One implication of their analysis is that corporate governance in Europe and Japan may not converge to U.S. practice simply by introducing the same takeover regulations. If banks are able to maintain a comparative advantage in monitoring these countries may continue to see a predominance of bank monitoring.

### ***Section 1.5: Toeholds***

A great deal of recent theoretical research has focused upon the motivations and consequences of mergers (Jensen (1988) and Shleifer and Vishny (1988)). Several papers have discussed bidding strategies and techniques; notable examples include Fishman (1988) and Hirshleifer and Png (1989) who examine optimal strategies once a tender offer has been declared. However, relatively little attention has been paid to the strategies a potential bidder may use prior to announcing a tender offer. A commonly used method is the open market purchase of shares (toeholds) by a potential bidder before the official announcement of an offer.

A tender offer goes through several phases, each of which is subject to different legal structures. The initial phase is an acquisition period during which the bidding firm can employ open market purchases to obtain a toehold in the target. Legally, a firm may acquire up to five percent in the U.S. and up to ten percent in Europe of another firm

---

before it triggers a reporting requirement. Legal acts stipulate that once a firm obtains five percent of another firm's stock, it has 10 days (depending on the country) to file a disclosure form describing its intentions. Importantly, during this ten day period the potential bidder can continue to make open market purchases. Hence, toehold purchases may be considerably larger than 5% (10%) of a target firm. Once the report is filed, no additional open market activities are permitted.

Following the lodgment of the report the bidder must then make an official announcement of the tender offer. In this announcement he has to give the price and the closing date of the tender and some condition of the offer.

Regarding toehold strategies, the Ravid and Spiegel (1999) analysis leads to several conclusions. First, they demonstrate that larger toeholds are not unambiguously more effective at discouraging rival bidders. This may explain why many toeholds are small. Secondly, it was demonstrated that whilst toeholds allow the initial bidder to profit should a rival appear, winning is still always better than losing. However, because the legal institutions are part of the model within the Ravid and Spiegel analysis, it is possible to explore the impact of any changes within the prevailing laws. An explicit analysis of "fair price" provisions (which require the purchase of un-tendered shares at the highest price paid for any shares) indicates that such laws may provide some welfare benefits. In that sense, the analysis is similar in spirit to Bebchuk (1994), who concludes that the U.S. legal system (without the "fair price" provision) may facilitate inefficient transfers, whereas the Equal Opportunity rule (similar to the Fair Price provision) does not enable inefficient transfers to go through.

There have been a number of other toehold studies that examine several other important issues. Chowdhry and Jegadeesh (1994) model the toehold selection problem as the solution to a signaling game regarding the bidder's valuation of the target. Burkart's (1995) model provides an analysis of strategic bidding given that bidders hold initial stakes in the firm. His model predicts that overbidding will occur once a toehold is purchased. However, there is no derivation of an optimal toehold acquisition. Kyle and

Vila (1991) suggest that a bidder will generally want to purchase a toehold in order to acquire shares in the open market at a lower cost than what they can be obtained at in a subsequent tender offer. However, their paper does not consider multiple bidder contests nor does it explain why many firms never bother to purchase toehold shares. Most other papers, such as Shleifer and Vishny (1986) and Hirshleifer and Titman (1990) take the bidder's initial stake as given and then analyze the resulting game. Similarly, Singh (1995) discusses strategies for blockholders who have already purchased a toehold and the impact of such a situation on takeovers. Dewatripont (1993) discusses some of the trade-offs that are considered within a different framework, which envisions a contest between an initial raider and a potential white knight, with different private benefits.

As it has been pointed out in many academic papers, the implementation of one strategy, regulation or structure is highly dependent on the legal environment. Differences in legal institutes in different parts of the world define the main distinctions in corporate governance. There are two main and often compared systems of corporate governance, namely the U.S. and the EU. To proceed further it is worth looking at the major differences between these two systems.

## **Section 2: Institutional differences**

### ***Section 2.1: Comparative corporate governance: The USA and The EU***

Corporate ownership and governance differ among the world's economies, especially between the United States and the European Union. In contrast to the market-centered American model, European work on corporate and economic governance has generally reflected the dispersed allocation of political and economic power.

Enormous institutional differences also exist between the U.S., which is a system of federal states subordinate to a national authority and bound by a common history, culture and language and the EU, a system of independent states, attempting to create a set of



common regulatory policies. During the past half-century, since World War II, economies and business practices have converged in the EU and even more so in the U.S., whilst corporate governance structures have largely remained different on both sides of the Atlantic.

Similarly to the United States, Anglo-Saxon countries like the United Kingdom have equity-based systems of corporate finance, where the shareholder is the center of regulatory and legal protections. Conversely many Continental European countries have a creditor-based system of corporate finance whilst some also have a long tradition of worker co-determination<sup>22</sup>.

Although as mentioned above, there are several common features in the Anglo-American system of corporate governance, it is important to note that control by shareholders in the United Kingdom and the United States differs significantly. In the U.S. corporations enjoy extensive protection through anti-takeover laws, which is not the case in the U.K. Additionally, directors in the U.S. are subject to strong fiduciary duties. In the U.K. these obligations are much weaker (Mayer (2000)).

### **Section 2.1.1: Ownership Structure**

A distinctive feature of the British corporate governance system is that the environment in which its public companies operate resembles the one which exists in the United States. Besides a well developed equity market, the U.S. and the U.K. also share several other common features in their corporate governance systems. For example, in the U.S. and the U.K. the share state is diffuse; in contrast, member states in the European Union often have a controlling shareholder. Furthermore as in the U.S., the system of ownership structure and control in the U.K. has been described as an “outsider system”; where

---

<sup>22</sup> As Wymeersch (2001) pointed out, in 1996 the U.K. had thirty six listed companies per one million people and the U.S. had thirty listed companies for the same number of people. In contrast, France had eight, Germany five, and Italy only four listed companies per one million people. In the same year, the market capitalization of the U.S. stock markets was approximately 95% of the country's Gross Domestic Product (GDP), in the U.K. the proportion was even higher, approximately 135% (Wymeersch (1998)). Whereas in other major European countries, the equivalent figure was around 35% or even less. Studies indicate that the corporate governance framework adopted in the United Kingdom is more stringent and much more developed than those in other European countries (Caprasse and Setareh (1998)).

---

dispersed ownership prevails. Another similarity between the U.S. and the British systems is that institutional investors, such as pension funds, insurance companies and mutual funds (investment or unit-trust), play an important role in the ownership structure of listed companies. In the United States institutional investors own about fifty percent of the equity market and in the United Kingdom this number is between sixty and seventy percent (Cheffins (1999)). Dispersed ownership structures can only arise and persist under highly developed legal systems that give strong legal protections to minority shareholders (Coffee (2000)). In the absence of any type of protection, investors will be reluctant to make investments, except to the extent that they can participate in a powerful blockholder group. Thus blockholding can be thought of as a substitute for legal protection against expropriation. The common law traditions of the U.S. and the U.K. have provided such protection; while civil law systems, present in most of the European and Scandinavian countries, do not provide such protection.

In insider systems control is concentrated in the hands of a small number of investors with a variety of interests and agendas. Within the “insider systems” of Continental European countries like Germany, Austria, France, and Italy share-ownership tends to be concentrated in families or is held in large blocks by other corporations. Families control firms with minority, majority and super-majority blocks frequently through other firms. Also banks, trusts, or governmental entities sometimes hold controlling blocks of shares, consequently there may be a rise in cross-ownership between companies (Bergstrom, Hochfelt, Macey, Samuelsson (1995)). In a Franks and Mayer (1997) study, concerning Germany, it was found that 85,4% of the largest 171 quoted industrial companies had at least one shareholder with twenty-five percent or more of the outstanding shares of the company. Even more striking, was the fact that this same study found that in more than half of the sample companies there was a single majority shareholder. Thus, in contrast to the dispersed ownership structures present in the U.S. and U.K., concentration of ownership is one of the most distinctive features of the German equity market.

Furthermore mandatory provisions of European company laws, protected by tariffs, non-recognition rules, and conflict of laws rules, by far exceed those of the United States in

the extent of the regulation they provide. Some authors also provide evidence of the participation of interest groups in the law-making process. The U.S. corporate governance system, on the other hand, with its long-standing common market, has a remarkable absence of such interest-group inspired rules in its corporation laws (Carney (1996)).

### **Section 2.1.2: Capital Structure and Capital Requirements**

The capital structures of the U.S. and European systems are also quite different. Creditors of U.S. corporations enjoy a certain level of protection, but this protection is not as high as in the Continental European countries. Under U.S. law, contrary for example to German law, there exists no minimum capital requirement to incorporate a corporation; conversely minimum capital is a required standard in Continental Europe. Basically, once the company has registered and published the actual amount of its capital, the principle of publicity demands preservation, so far as possible, of the previously announced capital basis. Repayment of this capital is prohibited and a violation of this prohibition subjects the managers and all of the shareholders (not only those who benefited from the return of capital) to personal liability (The Second EC Company Law Directive). Sweden, for example, has recently doubled its minimum share capital for private companies, as has Finland. Denmark, by contrast recently reduced its minimum share capital requirements for private companies. Apart from the United Kingdom and Ireland and in direct contrast to the U.S., all European jurisdictions appear to impose minimum capital requirements for private companies.

### **Section 2.1.3: Role of Financial Institutions**

Another distinctive feature in the structure of capital markets is that in the U.S. and in the U.K. financial institutions, such as pension funds, mutual funds and unit-trusts hold shares and play a large and still growing role in corporate governance. By contrast, in Continental Europe depository institutions like banks play a much stronger role (Hansmann and Kraakman (2000)). In Germany, for example, small investors purchase shares through banks and usually leave their shares on a bank deposit and periodically assign their proxies to these banks. Frequently, these banks make voting

recommendations, and shareholders very rarely disapprove these recommendations. Thus consequently banks, who usually vote with management, powerfully insulate German companies from hostile takeovers. Dutch law extends even further than German law, permitting the use of a depository intermediary to strip shareholders of their vote entirely.

#### **Section 2.1.4: Incorporation**

Another distinctive difference between U.S. law and Continental European law is the question of incorporation. Unlike in the United States, where corporations simply file the articles of incorporation with the secretary of state or another designated state agency, the formation of, for example a German or Austrian, stock corporation “Aktiengesellschaft” or a French “Société Anonyme” is a more complicated process.

To summarize, the corporate global universe can broadly be broken down into two very different systems. First, the system of dispersed ownership, or “outsider system” which predominates in the United States and the United Kingdom; and secondly, the system of concentrated ownership, or “insider system”, which features either a controlling group or an interlocking network of shareholders who together control a broad collection of firms. Insider systems prevail in Continental Europe. The following table summarizes the main differences between these two systems.

*Table 1: Main differences between the outsider and insider systems of corporate governance (Source: J. Weigand (1999))*

CHARACTERISTICS	OUTSIDER-system	INSIDER-system
Equity market capitalization	high	low
Share ownership	yield-oriented short-term widely dispersed	value-oriented long-term concentrated
Block shareholders	rare	common
Changes in shareholders	common	rare
Role of banks	insignificant as controllers of company	significant possibilities for control (creditors, owners, supervisory boards)
	short-term financing of company	long-term financing of company
Control of management by shareholders	limited	extensive
Company goal	high yields for shareholders	secure market position

### **Section 2.1.5: Takeover Barriers and Defensive Strategies**

Takeover barriers and defensive strategies are some of the obstacles which a proposed takeover may sometimes have to overcome. In the literature, there is a distinction between takeover barriers and defensive strategies. The former are often used in Continental Europe and aim to protect a company from hostile takeovers (as will be shown later). The latter are widely used in the U.S. and include both pre-bid and post-bid defenses. Defensive strategies can contribute to shareholder value creation, if they are directed (as is often the case) at maximizing the bid's price or at frustrating bids which do not maximize wealth. If used to entrench the target's managers, defensive strategies are functionally similar to takeover barriers.

---

There are many types of barriers. In Europe the distinction is frequently made between structural and technical barriers to takeovers. The former reflect existing conditions in the economic environment (Gilson (1992)), including circumstances such as the ownership concentration in families and small groups, the influence of large banks and the relatively limited role of stock exchanges in corporate financing (Jenkinson and Mayer (1994)). Conversely, technical barriers are part of the corporate governance structure, as they are erected by statutes and by the companies' memoranda and articles of association, which specify the legal rules and allocate powers between the various interested parties (shareholders, management and labor). Techniques such as pyramidal groups, cross-shareholdings and the issuing of non-voting shares are commonly used technical barriers. Not only do these barriers contribute to the separation of ownership and control, but they also protect management and the controlling shareholders from the risk of unfriendly takeovers. Other tools specifically aimed at discouraging takeover bids are often seen with respect to share transfer restrictions and voting caps. Examples of barriers with widespread use in Europe include: (1) share transfer restrictions, (2) voting restrictions, (3) voting agreements, (4) cross-shareholding, (5) disclosure rules.

Any comparison between the American and the European legal systems shows a substantial diversity as to the range of defensive tools available to obstruct any takeover attempt. This diversity appears to be a consequence of the different characteristics of corporate law, evident between the two regions. Corporate law tends to be more enabling in the U.S. and less concerned with creditors' protection than in Europe (Carney (1997)). The Second European Directive, for instance, severely restricts the repurchasing of the company's own shares, thus narrowing the scope of buy-backs as defensive measures. Furthermore the same directive provides for pre-emptive rights in the case of an increase of the company's capital, making it difficult for the target to allot shares to a friendly party in the event of a hostile bid. As argued for in the U.K. (but the comment could be extended to Europe in general), "it is clear that companies have relatively few defenses available in the event of a hostile bid. Target companies are typically limited to financial announcements (such as updated dividends and profit forecasts); disposals or revaluations

of assets; appeals to various regulators, or finding a white knight” (Jenkinson and Mayer (1994)).

## ***Section 2.2: Diversity in European Union Member States’ Laws***

When considering institutional differences between the member states of the European Union, it is important to note that within the European Union, contrary to the United States, the legal systems belong to different families of law. Insofar as corporation laws are concerned, it is difficult to divide the civil-law world into “code families” or other convenient groupings. However, at the outset it can be stated that the British legal system is based on common law whereas Continental European states have a civil law tradition. Within the civil law systems, both Roman and Germanic legal traditions are represented.

As mentioned above, the concentration of ownership is one of the most distinctive features of Continental European “insider systems” and distinguishes financial markets on the Continent from those in the United Kingdom, where ownership is much more diffuse. One should note however, that despite the very high degree of concentration of shareholder voting power in Continental Europe relative to the United Kingdom, the concentration of ownership is still considerably higher in the United Kingdom than in the United States. The most significant differences are apparent with regard to worker participation requirements and shareholder rights. Both worker participation and shareholder rights can be characterized as either strict or liberal. Whilst strict employee participation statutes give labor a larger voice in management, liberal laws allow management to exclude employees. Furthermore strict shareholder rights regimes provide for more shareholder oversight of management activities and correspondingly greater shareholder rights, whereas liberal regimes provide for less oversight and fewer shareholder rights.

For example both Germany and the Netherlands have relatively strict worker participation statutes, but offer fewer shareholder rights. In these countries and also in Denmark, Austria, Finland and Sweden employees or their representatives are involved in the board’s decision making process. By contrast, there are no rules on co-

determination in Belgium, Italy, Portugal, or the U.K.; also there is no co-determination in the U.S. Most co-determination systems are based on the dual board structure, mostly in an obligatory form. The German and the Dutch systems of co-determination are the most complex (Wymeersch (2001)). The German laws on labor participation generally apply to all German private corporations (GmbHs) with more than 500 employees, and to all stock corporations (AGs).

Sweden, similar to Germany requires employee representation on company boards. Sweden requires company boards to include up to three labor directors selected by the trade unions; although it also mandates that union directors must excuse themselves when the board addresses contentious issues of labor relations. Other European states such as Spain and Greece, for example, only mandate employee directors for state-owned enterprises (Hansmann and Kraakman (2000)).

In this context, the Fifth Company Law (Company Structure and Employee Participation), that was proposed in 1983 as directive for EEC countries, is interesting. This proposed directive would have harmonized the governance structure for “public” corporations but it encountered opposition and has not been adopted as yet because the proposal included some form of worker participation. The proposed directive covered the company structure, the management organ and supervisory organ, the general meeting, the adoption and audit of the annual accounts and general provisions. Two highly controversial aspects of these rules were the mandatory creation of a two-tier board structure consisting of a managing organ and a supervisory organ and mandatory provisions for employee’s representation on the supervisory board for companies with more than 500 employees. As a result of these controversial aspects today the proposal for a Fifth Company Law Directive appears to be abandoned.

For the same reasons as the proposed Fifth Directive, the proposal to permit the creation of a “European Company” (*Societas Europaea*, SE) had until the turn of the century made no headway in the preceding decade. However, at the Nice summit of December 2000, the realization of the European Company seemed possible for the first time since its



---

introduction in 1970. On 20 December 2000, a common position was agreed upon by the Council. Under the terms of these agreements, reached thirty years after the first Commission proposal, the statute for a European Company will give firms operating in several member states the opportunity to set up a public limited-liability company. This European Company will work as a single operator throughout the European Union on the basis of a single legislative and management system, instead of being subject to the national legislation of each member state in which it would have subsidiaries. For companies operating on an internal market scale, the European Company status will bring significant administrative savings and a legal structure suited to the large market in which they will develop.

In October 2001, the European Company Statute was adopted and has become reality in the EU. The European Company statute is established by two pieces, namely a regulation and a related directive concerning worker involvement in European Companies. The disputes concerning worker involvement were solved in the following way: The directive on worker involvement requires negotiations on the involvement of employees with a special body representing all employees of the companies concerned. If negotiations do not lead to a mutually-satisfactory arrangement, a set of standard principles (laid down in the Annexe to the directive) will apply. In some special cases standard principles on participation of workers will apply. This is the case when (1) a mutually satisfactory agreement among managers and employee representatives cannot be reached and (2) where the companies involved in the creation of a SE were previously covered by participation rules. If the SE, for example, is created by a merger, standard principles on participation will apply, when at least 25% of employees had the right to participate before the merger. The ultimate creation of a European Company has shown how difficult the finding of compromise solutions among European member states, with their different corporate cultures, can be. However, with the adoption of the European Company Statute it will finally be possible to establish a single company under Community law, and to operate throughout the EU with one set of rules rather than under the different laws of European member states.

Another example of divergent attitudes among EU member states relates to shareholder rights. Concerning shareholder rights, the United Kingdom, in contrast to Germany, ranks these rights highly. The German corporate governance model is perhaps most often described as embodying a “stakeholder culture” in which the purpose of the company is to advance not only the interests of shareholders but also the interests of company managers, employees and creditors (Andre, T.J. Jr. (1998)); whereas the concept of “shareholder value” dominates in the United Kingdom. In fact, in recent times the term “shareholder value” has also become a slogan for leading German companies. Nevertheless shareholder interests do not have the same importance in Germany or other Continental European countries, as they do in the U.K. Also some German managers are still openly skeptical of an Anglo-Saxon intervention that challenges the social consensus mentality of the typical German company<sup>23</sup>.

Generally, it should be noted that greater shareholder rights imply a greater likelihood of a successful takeover attempt because shareholders usually benefit from bid premiums and thus have a favorable attitude towards takeovers. The United Kingdom, which has the greatest occurrence of hostile takeovers in the European Union, is very solicitous to shareholders in the takeover context (Stith (1991)). The defenses available to a British target company facing a potential hostile takeover are much more modest than defenses in other European member states. Differences in regulation therefore confer substantial control benefits on minorities in the United Kingdom (and also in the United States) but not for example in Germany, where large block-shareholders dominate.

Given the pattern of differences among the laws of the member states of the EU, especially in regard to worker participation rules and shareholder rights, it seems that managers cannot have it both ways. If management avoids the monitoring by shareholders, it must give in to worker demands for representation on the board of directors. In this context the questions of which jurisdiction could be the most successful

---

<sup>23</sup> This was also exemplified by Jurgen Schremp, chairman of the board of directors of the former Daimler-Benz AG, now Daimler-Chrysler, when he originally converted to the principle of shareholder value having espoused the concept since the late 1990s (Schmid (1996)).

in attracting corporate charters in the European Union and whether there is a need to harmonize takeover laws becomes more apparent.

The European institutional framework reflects that the crucial determinants of the respective “comparative advantages” which companies enjoy are the differences in the organization of capital markets, the rules of company law and the forms of employee participation in the European member states.

### **Section 3: The Model**

Having reviewed the relevant theories, it is time to formalize the main question of this research, namely: the influence that legal parameters have on the post-takeover value of a firm. As mentioned above there is a large number of researches regarding the post-takeover value of a firm, as well as many other researches that focus on the legal framework and investigate the general influence of laws. The large amount of research shows that the legal environment does indeed influence the outcome of takeover at a high level. However, formalization of this influence has rarely (almost never) become the main theme of any research.

I argue that it is possible to formalize some legal factors that influence the outcome on the value of a firm after their implementation. The main intuition behind this research is to show the impact of toeholds, defensive strategies and the presence of large shareholders upon the post-takeover value of a firm. It is argued that the possibility of implementation of defensive strategies and the presence of large blockholders increase post-takeover value significantly, at the same time their presence lowers takeover probability dramatically. But the possibility to buy shares on the open market gives the Rival more incentives to make a tender offer.

A large amount of the theoretical literature deals with the dynamics of the tender offer process in various settings. And the free-rider problem became a benchmark within much of these researches. A prominent theme in this literature is the role of the initial

ownership structure, in particular the impact of blockholders. Many papers analyze takeovers where either a bidder or the incumbent management owns an initial stake; whilst the role of blockholders as tendering shareholders has so far received little attention in the theoretical literature. The possibility of implementing various weapons of defense has been widely discussed in the works of many scholars. Toeholds strategies have received significant attention as well. Despite this, the joint effect of these two factors has not been discussed as yet. As pointed out above, blockholding, defensive strategies and toeholds (mainly disclosure rules) constitute the main differences between the two corporate governance systems of the U.S. and Europe. I will look at the outcome, namely the post-takeover value of a firm for minority shareholders, which is brought by these factors. The formal model will be analyzed in order to obtain significant results.

### ***Section 3.1: Basic Model***

To investigate the impact of these factors on the value of a firm, the researcher has decided to apply the analysis forwarded in the working paper “Minority Blocks and Takeover Premia” by Mike Burkant, Denis Gromb and Fausto Panunzi (2005). In this work the authors want to explore the aspect of block ownership in takeovers. They analyze ‘takeovers of firms owned by a majority of atomistic shareholders and one minority blockholder who does not counter-bid but merely decides whether to tender or retain his shares’ (Burkant, Gromb and Panunzi (2005)). The main analyzed question is the impact of the minority blockholder on the firm valuation after takeover. As a result of the paper the authors conclude that in the presence of such a minority blockholder the bidder can be forced to offer a higher premium compared to the case of a fully dispersed firm (Burkant, Gromb and Panunzi (2005)).

The model of Burkant, Gromb and Panunzi deals with the analysis of companies that are owned by atomistic shareholders and by one minority blockholder and are in the process of a takeover. All shareholders can tender or refrain from tendering. The tendering decision of the blockholder and the small shareholders interact with each other. The authors argue that as private benefit extraction is inefficient, the post-takeover share value increases with the bidder’s shareholding. It is also worth adding that in a successful

takeover, the blockholder tenders all his shares and the small shareholders tender the amount needed, such that the post-takeover share value matches the bid price.

Before stating the model put forward by Burkant, Gromb and Panunzi (2005) I introduce the notation that is used in the following analysis<sup>24</sup>:

$\alpha$  - stake of the company owned by the blockholder;

$v_I$  - share value under incumbent manager;

$v$  - blockholder's valuation of the firm (per share);

$v_R$  - rival's valuation of the company (per share);

$v_S$  - share value under incumbent manager after the implementation of defensive strategies;

$v_B$  - blockholder's valuation in the case of the implementation of defensive strategies;

$p$  - probability of success of the defense;

$\lambda$  - the size of the toehold;

$d$  - the set of the defensive strategies;

$\Lambda$  - private benefits for the blockholder;

$\phi$  - private benefits of control for the rival;

$l(\phi)$  - deadweight loss associated with rival's private benefit extraction;

$\gamma$  - the fraction of shares tendered by the blockholder,  $\gamma \in [0, \alpha]$ ;

$\eta$  - the fraction of shares tendered the small shareholders,  $\eta \in [0, 1 - \alpha]$ .

$\beta$  - the stake of the company acquired by the rival.

According to Burkant, Gromb and Panunzi (2005) a blockholder in the model owns a fraction  $\alpha < 50\%$  of shares and a number of small shareholders who owns the rest of the shares,  $(1 - \alpha)$ . A Rival approaches the firm to gain a control. The Rival has no initial stake in the company, as well as all shares are assumed to be one-vote shares. The Rival

---

<sup>24</sup> In order to investigate the impact of various defensive weapons, toehold strategies and blockholders on the post-takeover value of a firm with particular references to the differing legal environments present within the U.S. and Europe, I have decided to apply the analysis. Consequently the following section presents a modified version of the formal model put forward by Burkant, Gromb and Panunzi (2005).

needs to attract at least 50% of the shares through a public offer to takeover the company. The shareholders either refrain from tendering their shares or sell them. In this model no further options or choices are available to any player (no counter bids, no purchasing of shares on the open market, etc.).

Under current management the value of the firm is  $v_I$  per share.

Burkart, Gromb and Panunzi (2005) denote the total per-share value of the blockholder stake as  $v = v_I + \frac{\Lambda}{\alpha}$ , where  $\Lambda$  is blockholder's private benefits. It is assumed that  $\Lambda > 0$ . For  $\Lambda = 0$ , the blockholder and the small shareholders have similar interests.

In the analysis put forward by Burkant, Gromb and Panunzi (2005) the takeover process falls in three parts:

First, the Rival makes a take-it-or-leave-it, conditional, unrestricted tender offer; he submits a price  $b$  at which he has to buy all tendered shares. The Rival also pays a cost of  $c > 0$ .

Then, the shareholders simultaneously and non-cooperatively decide whether to tender. The blockholder knows that his decision may affect the outcome. In contrast small shareholders do not perceive themselves as pivotal for the outcome of the tender offer.

In the last stage, if less than  $1/2$  the shares are tendered, the offer fails and nothing changes. Otherwise, the rival gains control and holds  $\beta \geq \frac{1}{2}$  of the shares.

If the bid is successful the Rival allocates the firm's resources as follows: they are used to generate either security benefits which accrue to all shareholders or private benefits which only the rival enjoys. Therefore the rival chooses  $\phi \in [0,1]$  such that security benefits are  $(1-\phi)v_R$  while private benefits are  $(\phi-l(\phi))v_R$ . Where deadweight loss

associated with private benefits extraction,  $l(\phi)$ , is strictly increasing and convex on  $[0,1]$ , with  $l(0) = 0$ ,  $l'(0) = 0$  and  $l'(1) > 1$ .

In addition, in previous works, especially those of Burkart, Gromb and Panunzi (1998) and Shliefer and Wolfenzon (2002), ‘it was argued that the extraction of private benefits is inefficient and its marginal return decreases. [Furthermore] private benefit extraction affects all shares equally’ (Burkart, Gromb and Panunzi (2005), p. 7).

### *Tender Offers and Minority Blockholders*

#### *Resource Allocation and Shareholder Wealth*

In the case of a successful tender offer bid the Rival owns a fraction  $\beta \geq \frac{1}{2}$  of the shares. Furthermore he must decide upon a fraction  $\phi$  of resources, which are to be his exclusive benefits. The private benefit extraction causes a deadweight loss of  $l(\phi)$ . Consequently the Rival must choose  $\phi$  in such way as to maximize his payoff  $\beta(1-\phi)v_R + (\phi - l(\phi))v_R$ . The solution of this maximization problem is denoted by  $\phi^\beta$ . It is obvious that the higher the value of  $\phi$ , the lower the value of all the shares. From the first-order condition  $(1-\beta) = l'(\phi)$  it is seen that with an increase in  $\beta$ , the rival’s private benefits  $(\phi^\beta - l(\phi^\beta))v_R$  decreases and the post-takeover share value  $(1-\phi^\beta)v_R$  increases (Burkart, Gromb and Panunzi (2005)).

In the work of Burkart, Gromb and Panunzi the authors restrict their attention to ‘parameter constellations such that any successful bid is value-increasing’ (2005, p.8). The term successful bid is therefore understood to be a value-increasing bid:  $(1-\phi^\beta)v_R \geq v_I$ .

### *Tendering and Bid Price*

In equilibrium, the shareholders expectations must coincide with the actual outcome. These expectations can be divided into:  $\hat{\alpha}$  - expectation about the fraction tendered by the

rival and  $\hat{\eta}$ - expectation about the fraction tendered by the small shareholders, and  $\hat{\beta} = \hat{\alpha} + \hat{\eta}$  expectation about the bidder's final shareholding. Taken together these expectations describe the tendering behavior of the shareholders.

According to Burkant, Gromb and Panunzi (2005) there are only two equilibrium outcomes. Either the success or the failure of the bid. To describe the equilibrium outcome as a function of the bid price, the authors defined:

$$b^* \equiv \max \left\{ (1 - \phi^{1/2})v_R; \min \left\{ v; (1 - \phi^{\frac{1}{2} + \alpha})v_R \right\} \right\}.$$

In other words the equilibrium outcome is obtained by choosing the highest payoff for small shareholders. This equilibrium is the dominant equilibrium outcome (Burkant, Gromb and Panunzi (2005)).

Further expending their analysis Burkant, Gromb and Panunzi (2005) prove that for all bids, there exists a single dominant rational expectations equilibrium outcome:

- i) For  $b < b^*$ , the bid fails.
- ii) For  $b \in [b^*, v_R]$ , the bid succeeds.
  - The blockholder tenders all his shares
  - The small shareholders tender a fraction  $\eta$  of shares such that
 
$$b = (1 - \phi^{\alpha + \eta})v_R.$$

- iii) For,  $b > v_R$  the bid succeeds and all shares are tendered. (Burkant, Gromb and Panunzi (2005), p. 9)

It was also shown that failure is a rational expectations equilibrium outcome for all bids  $b$ . Irrespective of the price offered and given that an offer is conditional and shareholders are atomistic, failure of the tender offer is always an equilibrium. However in any successful bid equilibrium case, the following always holds:  $b \geq (1 - \phi^\beta)v_R$ . To be able to avoid the free-rider problem the Rival must always bid at least the post-takeover share value (Burkant, Gromb and Panunzi (2005)).



Furthermore Burkart, Gromb and Panunzi (2005) have shown that in any equilibrium in which the bid succeeds, the blockholder sells his entire block.

The only equilibrium outcome in which all bids  $b \in [b^*, v_R]$  succeed, is when  $\gamma = \alpha$  and  $b = (1 - \phi^{\alpha+\eta})v_R$ . This outcome dominates failure for the small shareholders. It holds as well when  $b > v_R$ . In addition, in this case all the shares will be tendered (Burkart, Gromb and Panunzi (2005)).

### *Optimal Bid*

The Rival's optimal bid is equal to  $b^*$  - the equilibrium bid. However, due to the free-raider problem, even with this optimal bid the Rival cannot make any profit. Therefore the only source of gain, for the Rival, is his private benefits. However, considering the properties of the deadweight loss function, the larger the stake of the company the raider acquires the smaller private benefits he has. Hence, the higher the bid price the more shares are tendered in a successful takeover. Thus, it is optimal for the Rival to bid the lowest price ensuring success, i.e.,  $b = b^*$  (Burkart, Gromb and Panunzi (2005)).

### *The Effect of a Blockholder*

According to Burkart, Gromb and Panunzi (2005) to obtain control over the company in the case of a fully dispersed ownership ( $\alpha = 0$ ), the Rival aims at attracting the minimum amount of shares required; i.e. exactly 1/2. In this case the post-takeover share value is equal to  $(1 - \phi^{\frac{1}{2}})v_R$ , which is the exact amount the Rival must offer to induce shareholders to tender half their shares (Burkart, Gromb and Panunzi (1998)).

Compared to the case of a fully dispersed ownership ( $\alpha = 0$ ), the presence of a minority blockholder affects the equilibrium outcome as follows:

- i) For  $v \leq (1 - \phi^{\frac{1}{2}})v_R$ , the blockholder has no impact on the outcome.

ii) For  $v > (1 - \phi^{1/2})v_R$ , the presence of a blockholder implies

- A higher bid price and post-takeover share value in the case of a takeover;
- A lower takeover probability (Burkant, Gromb and Panunzi (2005), p. 14).

Even when the blockholder's value exceeds the per-share value under the current management ( $v > (1 - \phi^{1/2})v_R$ ) a bid matching the post-takeover share value when 50% of the shares are tendered ( $b = (1 - \phi^{1/2})v_R$ ) succeeds. In this case the blockholder enjoys no or little private benefits, since all the bids are value-increasing. Therefore the presence of the blockholder is not crucial for the outcome, since the bidder offers the same bid price to acquire the same fraction of shares (50%) as he does when the target is fully dispersed (Burkant, Gromb and Panunzi (2005)).

Whilst in the case when the blockholders share-value of his stake exceeds the post-takeover share value when a half of the shares are tendered, due to substantial private benefits - his presence does matter. Hence the bidder has to increase the bid price to the level where either the blockholder accepts the offer or the Rival can acquire enough shares from the small shareholders to gain control. This situation is preferred by the small shareholders, since such a blockholder brings benefits by necessitating a higher takeover premia. At the same time, however, it reduces takeover likelihood (Burkant, Gromb and Panunzi (2005)).

### ***Section 3.2: New Parameters***

In the literature review the author pointed out the main differences (toeholds, large shareholders, defensive strategies) between the corporate governance systems of the U.S. and EU. In this section I will continue the analysis started in the first section. But here I will look at it from a different angle – the formal analysis of the impact of these major differences. To compare these significant differences, the author introduces new parameters to the model described above.

I will look at the effect of new parameters separately and then all together in one model. This is done to understand the impact of different regulatory tools on the value of a firm after takeover. By the term different regulatory tools I assume such instruments as those which allow the regulator to control, for example, the trade of share that is owned by shareholders whose stake exceeds 10% (the E.U. practice).

### Section 3.2.1: Defensive Strategies

One of these parameters will indicate the possibility to implement takeover defenses. For simplicity I will operate only with value increasing defensive strategies as poison pills, since all the agents on the market are thought to be rational. It must be said that some value increasing defensive strategies may be implemented in Europe. But an arsenal of these sorts of strategies available and the probability of a successful implementation of these defenses is obviously much less likely in Europe than in the U.S., because of the above-mentioned barriers, both technical and structural. There is a bigger arsenal of such value increasing weapons available for American companies. The defensive strategies are mostly used as another source to strengthen the bargaining position of shareholders. Hence, shareholders have more arguments to bargain for a better price. Parameters  $g(d)$  and  $p$  are introduced. They are the benefit from defensive strategies and the probability of the legal use of these defensive strategies respectively.  $p$  can take any values in an interval from 0 to 1,  $p \in [0,1]$ . In other words, if  $p$  is equal to 0 then it is legally impossible to use any of the defensive strategies, or one can say that defensive strategies are unavailable to the economic agent. Let  $g(d)$  refer to the benefit from the use of defensive strategies. It depends on defensive tactics chosen by a firm, but it is out of the scope of this paper to discuss the influence of any particular strategy. In other words,  $g(d)$  can be understood as the added value to the price of a share. This parameter fully depends on intensity of use of the strategy.  $g(\cdot)$  is a strictly increasing and concave function on  $[0, \infty)$ , with  $g(0) = 0$ .

These two parameters are included in the model in the following way:

$$v_s = v_l + p \cdot g(d),$$

where  $v_I$  - per-share value of a firm for all shareholders under incumbent manager;  $v_S$  is per-share value for all shareholders after implementation of a set of the defensive strategies. In other words, shareholders are willing to increase their value and this can be done by means of the defensive strategies available. At the same moment the added value does not only depend on the set of strategies, but also depends on the probability of successful implementation of them.  $v_S$  has the following properties:  $\frac{\partial v_S}{\partial p} = g(d) \geq 0$  - increases with the probability of the successful use of defensive strategies. It is obvious that in the environment where the arsenal and legal framework allow the use of defensive strategies, first, the probability of success of the defensive strategy is much higher, and consequently, the per-share value increases as well.  $\frac{\partial v_S}{\partial d} = p \cdot g'(d)$ , where  $g'(d) \geq 0$  by assumption, therefore,  $\frac{\partial v_S}{\partial d} = p \cdot g'(d) \geq 0$  - increases with intense use of defensive tools.

As it is said above, shareholders will increase their value more if they use more intensive defensive strategies, or a combination of them. In other words, the more effort shareholders put into defense the more value they add.

### *Effect of Implementation of Defensive Strategies*

Now I want to analyze the impact of implementation of defensive strategies on per-share value of the firm; in order to understand the possible consequences of this for shareholders.

In the case of no defense strategies with fully dispersed ownership ( $\alpha = 0$ ), the Rival would have as a target exactly half of the shares and would offer  $b = \left(1 - \phi^{\frac{1}{2}}\right)v_R$  and this

is the bid that the Rival must offer to induce shareholders to tender half of their shares.

Relative to the case of fully dispersed ownership and absence of defensive strategies, the possibility of implementation of such strategies and its arsenal affects the equilibrium outcome as follows:

i) For  $v_S \leq \left(1 - \phi^{\frac{1}{2}}\right)v_R$ , implementation of defensive strategies increases share value.

ii) For  $v_S > \left(1 - \phi^{\frac{1}{2}}\right)v_R$ , the possibility to implement defensive strategies implies:

- A higher bid price and post-takeover share value in the case of takeover;
- A lower probability of takeover.

For  $\alpha = 0$ , and no defensive strategies available  $b_d^* = \max\left\{\left(1 - \phi^{\frac{1}{2}}\right)v_R\right\} = \left(1 - \phi^{\frac{1}{2}}\right)v_R$ .

For  $v_S \leq \left(1 - \phi^{\frac{1}{2}}\right)v_R$ ,  $b^* = \max\left\{\left(1 - \phi^{\frac{1}{2}}\right)v_R, v_S\right\} = \left(1 - \phi^{\frac{1}{2}}\right)v_R$ . This new share value is

higher than in the case of a fully dispersed ownership:  $b_d^* \geq v_I$ , where  $b_d^*$  - is optimal bid price in the case of a fully dispersed ownership, no defensive strategies available, no large shareholder, no toeholds. But  $v_S \geq v_I$  and  $b^* \geq v_S$ , hence,  $b^* \geq b_d^*$ . In other words implementation of defensive tools leads to higher bids and higher share value.

For  $v_S > \left(1 - \phi^{\frac{1}{2}}\right)v_R$ ,  $b^* = \max\left\{\left(1 - \phi^{\frac{1}{2}}\right)v_R, v_S\right\} = v_S > \left(1 - \phi^{\frac{1}{2}}\right)v_R$ . It leads to a higher bid

price than in the pure case of a fully dispersed ownership and higher  $\beta$ . But these all imply lower profits for the Rival and therefore a lower probability of takeover. The takeover probability decreases with any increase in the probability of success of defense, which is itself a cause of the increase in added value from the use of the defensive strategy.

### Section 3.2.2: Large Shareholder

A different problem is created by blockholders when they own a minority stake of the share capital, but one that is sufficient to participate in the control of the target. If the private benefits of control are relatively high (as happens in countries where investor protection is not yet fully developed<sup>25</sup>), the target blockholders might resist the takeover for reasons other than shareholder value maximization. The outcome (if the blockholders'

<sup>25</sup> See Zingales (1994)

vote prevails, also as a consequence of the other shareholders' apathy) could be similar to that obtained in the U.S. when managers resist a takeover mainly for entrenchment purposes.

The presence of private benefits is crucial in several aspects. As mentioned above, shareholders tend to increase their stock in a legal environment which lacks the legal protection of investors. In this way (in increasing the stake of the company) they protect themselves. In other words, they try to neglect this legal inefficiency. By having the majority or supermajority or at least a stake close to controlling, investors can influence almost all the processes inside the firm and in particular can assign managers to key positions or can even assign a full board of directors.

From this point of view it is logical to assume the increase of private benefits from acquiring an extra stake in the company. As in the basic model,  $\alpha$  is the fraction of the firm owned by a blockholder, or a number of shareholders acting in coalition. Consistent with the assumption made above about the lack of legal protection, I will assume that private benefits rise with an increase in a stake, which gives a significant increase in the blockholder valuation of his stake. Formally it is as follows:

$$v_B = v_S + \frac{\Lambda(\alpha)}{\alpha},$$

where private benefit function  $\Lambda(\cdot)$  is strictly increasing and concave on  $[0,1]$ , with  $\Lambda(0) = 0$ .

### *Effect of a Large Shareholder*

This is done because of the same reason, to show the impact of such a regulatory action upon blockholding. The actual effect of a large shareholder depends on his stake. If it is less than the 50% of all shares, then we have the same case as in Burkart, Gromb and Panunzi (2005), fully dispersed ownership and a minority blockholder:

- i) For  $v_B \leq \left(1 - \phi^{\frac{1}{2}}\right)v_R$ , the blockholder has no impact on the outcome.

ii) For  $v_B > \left(1 - \phi^{\frac{1}{2}}\right)v_R$ , the presence of a blockholder implies

- A higher bid price and post-takeover share value in the case of a takeover;
- A lower takeover probability.

For  $\alpha = 0$ , and no defensive strategies available

$$b^* = \max \left\{ \left(1 - \phi^{\frac{1}{2}}\right)v_R, \min \left\{ v_B, \left(1 - \phi^{\frac{1}{2}}\right)v_R \right\} \right\} = \left(1 - \phi^{\frac{1}{2}}\right)v_R.$$

For  $v_B \leq \left(1 - \phi^{\frac{1}{2}}\right)v_R$ ,  $b^* = \max \left\{ \left(1 - \phi^{\frac{1}{2}}\right)v_R, v_B \right\} = \left(1 - \phi^{\frac{1}{2}}\right)v_R$ . Hence, we can see no impact on the post-takeover value.

$$\text{For } v_B > \left(1 - \phi^{\frac{1}{2}}\right)v_R, \quad b^* = \max \left\{ \left(1 - \phi^{\frac{1}{2}}\right)v_R, \min \left\{ v_B, \left(1 - \phi^{\frac{1}{2}+\alpha}\right)v_R \right\} \right\} > \left(1 - \phi^{\frac{1}{2}}\right)v_R.$$

Compared to the case of fully dispersed ownership, this gives a higher bid price and a higher  $\beta$ . But it is also associated with lower profits for the Rival and this in turn implies a lower probability of takeover.

The presence of a majority blockholder changes the entire picture. The majority blockholder has over or at least 50% of all shares. This is why his presence becomes so important; especially given the possibility to generate private benefits. By assumption, the larger the stake a blockholder controls the larger the private benefits he extracts. The blockholder could appoint a loyal manager to the board, securing his investments in the business, when there is a lack of protection for investors.

The presence of a majority blockholder becomes crucial for the Rival, since he cannot take over the firm without bidding for the shares of the majority blockholder.

i) For  $v_B \leq \left(1 - \phi^{\frac{1}{2}}\right)v_R$ , takeover is successful.

ii) For  $v_B > \left(1 - \phi^{\frac{1}{2}}\right)v_R$ , the presence of a majority blockholder implies

- A higher bid price and post-takeover share value in the case of a takeover;
- A lower takeover probability.

For  $\alpha = 0$ , and no defensive strategies available

$$b^* = \max \left\{ \left(1 - \phi^{\frac{1}{2}}\right)v_R, \min \left\{ v_B, \left(1 - \phi^{\frac{1}{2}}\right)v_R \right\} \right\} = \left(1 - \phi^{\frac{1}{2}}\right)v_R.$$

For  $v_B \leq \left(1 - \phi^{\frac{1}{2}}\right)v_R$ ,  $b^* = \max \left\{ \left(1 - \phi^{\frac{1}{2(1+\alpha)}}\right)v_R, v_B \right\} = \left(1 - \phi^{\frac{1}{2(1+\alpha)}}\right)v_R$ . Hence, we can say

that the takeover will always be successful, but there is no impact on the post-takeover value in this case. Besides this, the majority shareholder will tender his entire stake plus half of the atomistic shareholders will sell their shares. Compared to the case of no blockholders this leads to a higher  $\beta$ . And this situation is very attractive for the Rival. Since he got rid of the free-rider problem and gained control over the firm. However, on the other hand, there is a decrease in his private benefits because he internalizes more inefficiency by acquiring a higher stake of the firm.

For  $v_B > \left(1 - \phi^{\frac{1}{2}}\right)v_R$ ,  $b^* = \max \left\{ \left(1 - \phi^{\frac{1}{2}}\right)v_R, \min \left\{ v_B, \left(1 - \phi^{\frac{1}{2+\alpha}}\right)v_R \right\} \right\} > \left(1 - \phi^{\frac{1}{2}}\right)v_R$ .

Compared to the case of fully dispersed ownership this gives a higher bid price and higher  $\beta$ . But it is also associated with much lower profits for the Rival and this in turn implies a much lower probability (almost an impossibility) of takeover.

### Section 3.2.3: Toehold

Relatively little attention has been paid to the strategies a potential bidder may use prior to announcing a tender offer. A commonly used method is the open market purchase of shares (toeholds) before the official announcement of the offer.



In this work I will use a single parameter that shows a stake of shares purchased on the open market<sup>26</sup>.

Let  $\lambda$  be the fraction of shares available to the bidder to buy on the open market. It is assumed that the Rival can buy any number of shares according to the law. After he reaches a limit he would need to either ask the regulator to let him buy more shares or to stop buying and announce the official tender offer. The Rival chooses  $\lambda$  by solving the value maximization problem.

The value maximization function of the bidder becomes:

$$(\lambda v_I + (\beta - \lambda) v_R)(1 - \phi) + (\phi - l(\phi)) v_R$$

The solution to the first-order condition  $1 - (\beta - \lambda) = l'(\phi)$  is denoted by  $\phi^{\beta - \lambda}$ . When choosing  $\phi$ , the value of the shareholders' share and the share of the bidder himself is reduced. It is obvious from the solution of the first-order that with an increase in  $(\beta - \lambda)$  the bidder internalizes the inefficiencies and extracts less private benefits, which in turn leads to a higher value of the firm. It is obvious that the bidder will use this opportunity to buy shares on the open market for a price less than his valuation of the firm, and therefore increase the extraction of private benefits. It is his only opportunity to make a profit, since to induce shareholders to tender their shares the Rival should offer them the maximum valuation. Hence, the only source of profit for the Rival is private benefits, which increase with any increase in  $\lambda$ . Hence,  $\phi^{\beta - \lambda} \geq \phi^\beta$ .

As it was said, the Rival should think carefully about the purchase of shares on the open market. It might be in the interest of the Rival to use the opportunity to buy shares on the open market and therefore increase his private benefits. On the other hand, if he reaches a certain limit, he will need to disclose his identity and further plans. This, in turn, might

---

<sup>26</sup> There is a second possible method of study the influence of toehold strategies which is more complicated and implies the use of game-theoretical model of signaling. Since shareholders could take the disclosure information as a signal of the bidder's valuation of the firm, and therefore increase their expectation about the post-takeover value of the firm.

serve as a signal for shareholders to increase their expectations about the value of the firm, and therefore neglect or even overvalue the private benefit that the Rival might get by means of toeholds<sup>27</sup>.

To gain control over the firm the Rival has to obtain at least 50% of shares either by buying them on the open market, or through the tender offer or by a combination of these two possibilities. In this work the author assumes the mix of the open market purchases and the tender offer. Hence, if  $(\beta + \lambda) < \frac{1}{2}$ , then the takeover fails and the incumbent management team continues to run the firm. The wealth of the small shareholder is still  $v_I$  and the blockholder's worth  $v_B$ .

Since it is assumed that all the shareholders are rational, they will not tender their shares in the case when they do not benefit. Therefore, the Rival should offer them at least the same per-share value as they have before the tender offer. In other words, shareholders will only consider value increasing bids. Here, a value increasing bid is considered to be successful if it satisfies the following inequality:

$$(1 - \phi^{\beta - \lambda})v_R \geq v_S$$

### *Tendering and Bid Price*

As before the tendering behavior of the shareholders depends on their rational expectation about the fraction tendered by large and small shareholders,  $\hat{\alpha}$  and  $\hat{\eta}$  respectively, plus their expectation about the fraction of shares bought on the open market by the bidder,  $\hat{\lambda}$ . Opposed to the basic model the final expectation about the bidder's shareholding is now as follows:  $\hat{r} = \hat{\lambda} + \hat{\beta}$ , where  $\hat{\beta} = \hat{\alpha} + \hat{\eta}$ , so that  $\hat{r} = \hat{\lambda} + \hat{\alpha} + \hat{\eta}$ . This expectation should coincide with the actual outcome in equilibrium.

---

<sup>27</sup> The result obtained by Chowdhry and Jegadeesh (1994) is that in signaling equilibrium almost every type of bidder will purchase a positive toehold to signal his valuation. However, even when a rival is likely to buy shares, other elements of the problem may still induce the use of only modest open market purchases.

The equilibrium outcome is very much the same as in the basic model I described above, except that the bid price is now different. It is now dependent on the choice of  $\lambda$ , not only on  $\alpha$  and  $\beta$ :

$$b^* \equiv \max \left\{ (1 - \phi^{1/2 - \lambda})v_R; \min \left\{ v_B; (1 - \phi^{\frac{1}{2} + \alpha - \lambda})v_R \right\} \right\}$$

For all bids  $b$ , there exists only one dominant rational expectations equilibrium outcome:

- i) For  $b < b^*$  the bid is considered unsuccessful.
- ii) For  $b \in [b^*; v_R]$ , the bid succeeds.
  - the blockholder tenders all his shares ( $\gamma = \alpha$ ).
  - the small shareholders tender a fraction  $\eta$  of shares such that  $b = (1 - \phi^\beta)v_R$ .
- iii) For  $b > v_R$ , the bid succeeds and all shares are tendered.

From here it is obvious that the only equilibrium bid is the one that satisfies the following:

$$b \geq (1 - \phi^{\beta - \lambda})v_R$$

If the price is lower than the post takeover value of the firm then no atomistic shareholder will tender. This is well known as the free-rider phenomenon. Shareholders must be convinced to tender their shares, this is only possible when the price exceeds or is equal to the post-takeover share value.

As before a large shareholder, assuming a successful bid, sells his entire stake. This could be shown as follows: if a rival bid succeeds, then the large shareholder payoff is  $\pi_B = \gamma b + (\alpha - \gamma)(1 - \phi^{\gamma + \eta - \lambda})v_R$ . Since  $b - (1 - \phi^{\gamma + \eta - \lambda})v_R \geq 0$  as we stated above, and

$\frac{\partial \phi^{\gamma+\eta-\lambda}}{\partial \gamma} < 0$  it follows from the assumption we have made about the  $\phi$  function, we

have:

$$\frac{\partial \pi_B}{\partial \gamma} = b - (1 - \phi^{\gamma+\eta-\lambda})v_R + (\alpha - \gamma) \frac{\partial [(1 - \phi^{\gamma+\eta-\lambda})v_R]}{\partial \gamma} > 0.$$

Therefore, for the result to be optimal it is required that  $\gamma = \alpha$  - the large shareholder tenders all his shares. The same result was obtained by Holmstrom and Nalebuff (1992). They stated that an investor with a higher stake has more incentives to tender. As they showed in their model with a finite number of shareholders, a blockholder increases the chance of success by tendering some shares and thereby increasing the expected value of his retained shares. Additional gain from selling decreases when the number of retained shares becomes smaller. As a result the blockholder will only tender part of his shares in equilibrium. But according to Cadsby and Maynes (1998), partial tendering strategies are usual in theory, but are rarely seen in practice, where shareholders are more inclined to either tender all or none of their shares.

### *Optimal Bid*

The Rival has to optimize his own strategy of bidding. By assumption, all the agents are rational. Hence, the Rival knows the expectation of shareholders and will bid at least  $b^*$ . But the optimal bid is always equal to  $b^*$ , because if it exceeds  $b^*$  then the Rival will have less profit:  $b \geq b^*$ , the Rival's payoff from a successful takeover is  $\pi_R = (\lambda + \beta)(1 - \phi^{\beta-\lambda})v_R + (\phi^{\beta-\lambda} - l(\phi^{\beta-\lambda}))v_R - \lambda v_I - \beta b - c$ ; for  $b \in [b^*; v_R]$ ,  $b = (1 - \phi^{\beta-\lambda})v_R$  so that  $\pi_R = \lambda(1 - \phi^{\beta-\lambda})v_R + (\phi^{\beta-\lambda} - l(\phi^{\beta-\lambda}))v_R - \lambda v_I - c$  which is decreasing in  $\beta$  and therefore in  $b$ . With  $b > v_R$  shareholders will want to tender all their shares so that  $1 = \beta + \lambda$ . In other words the Rival will acquire all the shares, taking into account very little possibility for  $\lambda$  to become significantly large and the properties of the  $\phi$  function,  $\phi^\beta = \phi^{1-\lambda} \xrightarrow{\lambda \rightarrow 0} 0$ . Therefore the Rival's payoff is:  $\pi_R = \lambda(v_R - v_I) - \beta(b - v_R) - c$ . The last two components on the right hand side are strictly negative. The first right hand side component is greater or equal to zero. In the

overwhelming majority of cases, this profit will be negative. As we see from the analysis the Rival should offer exactly  $b^*$  to make his bid optimal.

The Rival is unable to make a significant gain on tendered shares basically because of the free-rider problem. The only source of his profit is private benefits and as it was shown in this model this is margin that the Rival makes when he buys shares on the open market. Private benefit extraction causes deadweight loss. At the same time, a larger stake after takeover makes private benefits smaller and decreases takeover gain. Therefore the Rival always looks for a possibility to bid the lowest price to ensure success of the takeover; this also includes use of the toehold strategy as a source of additional gain.

### *Effect of a Toehold Purchase*

The possibility to buy toeholds on the open market is very attractive for the Rival. He will have a higher profit than in the case of a fully dispersed ownership, since he increases his private benefits which are the only source of his profits, because of the free-rider problem. The other parameter being equal, this price would be less than in Burkant, Gromb and Panunzi model, since the Rival extracts more private benefits when he buys

shares on the open market. Hence,  $b_d^* = \left(1 - \phi^{\frac{1}{2}}\right)v_R \geq b_t^* = \left(1 - \phi^{\frac{1}{2}-\lambda}\right)v_R$ , since

$\phi^\beta \xrightarrow{\beta \rightarrow 1} 0$ , where  $b_d^*$ , as above, is the optimal bid in the case of a fully dispersed ownership, no defensive strategies available, no large shareholder, no toeholds;

$b_t^* = \left(1 - \phi^{\frac{1}{2}-\lambda}\right)v_R$  - bid price in case of toehold.

It is obvious from this analysis that the Rival will be willing to use the possibility to buy shares on the open market. At the same time, it harms the shareholders in the sense that they have a lower per-share value than they might had in the case of the Rider having no access to the open market.

### ***Section 3.3: Joint effect of the parameters***

Now we assume that all new parameters are in the model. In this section the model internalizes the major, in the author's opinion, regulatory parameters. The model will still be compared to the case of a fully dispersed ownership ( $\alpha = 0$ ). In the case of a fully dispersed ownership the Rival aims at attracting exactly  $\frac{1}{2}$  of all shares, the minimum amount required to obtain control. The post-takeover share value in the case of a fully dispersed ownership structure is equal to  $\left(1 - \phi^{\frac{1}{2}}\right)v_R$  and this is also the bid that the Rival must offer to induce shareholders to tender half of their shares.

All the cases here break down into two groups: the first group is where the minority blockholder is presented; the second group is where the majority blockholder is presented.

In the presence of the possibility to use different defensive strategies, substantial private benefits and the possibility for the Rival to buy shares on the open market leads to the following equilibrium outcomes.

I start the review of the effects from the first group – minority blockholder ( $\alpha < 50\%$ ):

i) For  $v_B \leq \left(1 - \phi^{\frac{1}{2}}\right)v_R$ , the blockholder has no impact on the outcome, but the

possibility of implementation of defensive strategies and toeholds imply:

- A higher bid price and post-takeover share value in the case of takeover, but lower than in the case of no allowance on purchasing shares on the open market;
- A lower takeover possibility, but slightly higher than in absence of the open market purchase possibility.

ii) For  $v_B > \left(1 - \phi^{\frac{1}{2} - \lambda}\right)v_R$ , the presence of a blockholder implies:

- A higher bid price and post-takeover share value in the case of a takeover, but lower than in the case of no allowance on purchasing shares on the open market;;
- A lower takeover probability, but slightly higher than in absence of the open market purchase possibility.

For  $\alpha = 0$ , no defensive strategies are available and no possibility to buy shares on the

$$\text{open market } b^* = \max \left\{ \left(1 - \phi^{\frac{1}{2}}\right)v_R, \min \left\{ v_B, \left(1 - \phi^{\frac{1}{2}}\right)v_R \right\} \right\} = \left(1 - \phi^{\frac{1}{2}}\right)v_R.$$

For  $v_B \leq \left(1 - \phi^{\frac{1}{2}}\right)v_R$ ,  $b^* = \max \left\{ \left(1 - \phi^{\frac{1}{2} - \lambda}\right)v_R, v_B \right\} = \left(1 - \phi^{\frac{1}{2} - \lambda}\right)v_R$ . This in turn should be

greater or equal to the present share value of the bid to be successful:

$$\left(1 - \phi^{\frac{1}{2}}\right)v_R \geq \left(1 - \phi^{\frac{1}{2} - \lambda}\right)v_R \geq v_S \geq v_I \text{ Hence, the possibility to buy shares on the open}$$

market decreases share value; implementation of defensive strategies, in turn, increases the price of shares and this leads to a slightly lower takeover probability. The Rival's profit is less in this case than in a fully dispersed ownership.

For  $v_B > \left(1 - \phi^{\frac{1}{2}}\right)v_R$ ,  $b^* = \max \left\{ \left(1 - \phi^{\frac{1}{2} - \lambda}\right)v_R, \min \left\{ v_B, \left(1 - \phi^{\frac{1}{2} + \alpha - \lambda}\right)v_R \right\} \right\} > \left(1 - \phi^{\frac{1}{2}}\right)v_R$ . But

$$\left(1 - \phi^{\frac{1}{2} + \alpha}\right)v_R \geq \left(1 - \phi^{\frac{1}{2} + \alpha - \lambda}\right)v_R \text{ Compared to the case of a fully dispersed ownership this}$$

gives a higher bid price and higher  $\beta$ , but this price is less than in the case of no possibility to buy shares on the open market. It also is associated with lower profits for the Rival and this in turn implies lower probability of takeover.

From the assumptions that have been made above, it is clear that in both cases,  $v_B \leq \left(1 - \phi^{\frac{1-\lambda}{2}}\right)v_R$  and  $v_B > \left(1 - \phi^{\frac{1-\lambda}{2}}\right)v_R$ , bid and share value are higher than in the basic model. Hence, one can conclude that the use of defensive strategies gives another chance for shareholders to bargain for better bid conditions, namely per-share value. At the same time it lowers the probability of takeover on one hand, but gives more strategic flexibility for the Rival on the other hand.

Now let us look on the second group (majority blockholder  $\alpha \geq 50\%$ ):

- i) For  $v_B \leq \left(1 - \phi^{\frac{1}{2}}\right)v_R$ , the open market purchase possibility, implementation of defensive strategies and toeholds have no impact on the outcome and takeover is successful;
- ii) For  $v_B > \left(1 - \phi^{\frac{1}{2}}\right)v_R$ , the presence of a majority blockholder implies
  - A higher bid price and post-takeover share value in the case of a takeover, the open market purchase possibility has no impact on the outcome, implementation of defensive strategies raises the value of the majority blockholder stake;
  - A lower takeover probability compared to all of the above cases.

For  $\alpha = 0$ , and no defensive strategies available

$$b^* = \max \left\{ \left(1 - \phi^{\frac{1}{2}}\right)v_R, \min \left\{ v_B, \left(1 - \phi^{\frac{1}{2}}\right)v_R \right\} \right\} = \left(1 - \phi^{\frac{1}{2}}\right)v_R.$$

For  $v_B \leq \left(1 - \phi^{\frac{1}{2}}\right)v_R$ ,  $b^* = \max \left\{ \left(1 - \phi^{\frac{1}{2(1+\alpha)}}\right)v_R, v_B \right\} = \left(1 - \phi^{\frac{1}{2(1+\alpha)}}\right)v_R$ . Hence, one can see

no impact on the post-takeover value. Besides this, the majority shareholder will tender his entire stake plus half of the atomistic shareholders will sell their shares. Compared to



the case of no blockholders this leads to a higher  $\beta$ . And this situation is very attractive for the Rival, since he got rid of the free-rider problem and gained control over the firm.

$$\text{For } v_B > \left(1 - \phi^{\frac{1}{2}}\right)v_R, \quad b^* = \max\left\{\left(1 - \phi^{\frac{1}{2}}\right)v_R, \min\left\{v_B, \left(1 - \phi^{\frac{1}{2}+\alpha}\right)v_R\right\}\right\} > \left(1 - \phi^{\frac{1}{2}}\right)v_R.$$

Compared to the case of fully dispersed ownership this gives a higher bid price and a higher  $\beta$ . But it is also associated with much lower profits for the Rival and this in turn implies a much lower probability (almost an impossibility) of takeover.

In this situation we see almost the same picture as above. These factors lead to a higher share value and a higher stake acquired by the Rival, which in turn is very attractive for the Rival, since he gets rid of the free-rider problem, but on the other hand dramatically decreases takeover probability. Even the possibility to buy shares on the open market is not essential here, since it gives too little help to the Rival in gaining control over the firm. On the other hand, if the Rival has enough financial resources then this situation is very attractive to him.

Conditional on the bid being successful, the blockholder has a higher willingness to tender than small shareholders. In fact, the blockholder tenders all his shares in any successful bid because he internalizes the appreciation of the untendered shares due to the increase in the Rival's final stake. As small shareholders base their decision to tender on the post-takeover share value which itself depends on the fraction of shares tendered, the blockholder's tendering decision affects their tendering decision as well. It is therefore impossible for the Rival to simply bypass the blockholder and to attract 50% of shares from small shareholders. To win control, the bidder must induce both the blockholder and (a fraction of) the small shareholders to tender. Because of the blockholder's reluctance to tender, the Rival is forced to increase the price offered in order to be successful.

---

## Conclusion

In this thesis I have developed an approach to model the impact of different legal parameters upon post-takeover outcomes. This paper shows that the presence of a defensive strategy leads to a higher bid price. This result is driven by the fact that defensive strategies are usually used as a back-up in bargaining for the better per-share price. Therefore the small shareholder's supply of share increases with the bid price, which lessens the inefficient extraction of private benefits by the Rival. The same result is obtained in the case of the presence of a blockholder. At the same time the possibility to buy shares on the open market leads to a lower bid price and gives an extra incentive to the Rival, since, in equilibrium, the only source of the Rival's profits is private benefits. And so the Rival increases his private benefits by acquiring shares on the open market.

The joint effect is driven by the individual effects of the parameters. In other words the positive relationship implies that the small shareholders' supply in the tender offer increases with the bid price but decreases with the number of shares tendered by the blockholder. It also means that the blockholder tenders his entire block in an equilibrium in which the bid succeeds. In this case, the bidder must offer a higher price either to win the blockholder's support or to attract enough shares from the small shareholders. But this is not the case in the presence of a majority blockholder, since then the Rival needs to offer the price that would satisfy the blockholder, and the role of minority shareholders does not become pivotal so their support is no longer needed. This benefits small shareholders, provided that the takeover is actually launched. Moreover, the presence of a blockholder, especially a majority blockholder, serves the role of a safeguard against value-decreasing bids.

There are some desirable implications amongst the results of the model. The presence of a majority shareholder has the following effect: it increases the fraction of shares tendered in equilibrium. As well as reducing the bidder's profit, a large shareholder acts as an anti-takeover device. That is why it is logical to expect the presence of a majority

shareholder and defensive strategies to be positively correlated. Majority blocks and takeover defenses both constitute an obstacle to hostile takeovers.

The extension of the present analysis might be empirical research that focuses on the effects of the above-mentioned legal characteristics. The author would expect consistent results. And, of course, such research is needed to be done before any decision regarding regulation in the corporate governance system can be made.

## References

Admati, Anat R., Paul Pfleiderer, and Josef Zechner (1994): “Large Shareholder Activism, Risk Sharing, and Financial Market Equilibrium”, *Journal of Political Economy* 102, 1097-1130.

Aghion, Philippe, and Jean Tirole (1997): “Formal and Real Authority in Organizations”, *Journal of Political Economy* 105, 1-29.

Aghion, Philippe, Patrick Bolton, and Jean Tirole (2000): “Exit Options in Corporate Finance: Liquidity versus Incentives”, Harvard University, Cambridge Mass

Andre, Thomas J., Jr. (1998): “Cultural Hegemony: The Exportation of Anglo-Saxon Corporate Governance to Germany”, *Tulane Law Review*.

Ayres, Ian, and P. Crampton (1994): “Relational Investing and Agency Theory”, *Cardozo Law Review* 15, 1033-1066.

Bebchuk, L.A. (1994): “Efficient and Inefficient Sales of Corporate Control”, *Quarterly Journal of Economics*, pp. 957 -994.

Bebchuk, Lucian Arye (1999): “A Rent-Protection Theory of Corporate Ownership and Control”, (NBER, Cambridge, Mass).

Bebchuk, Lucian Arye, and Allen Ferrell (2001): “A New Approach to Takeover Law and Regulatory Competition”, NBER, Working Paper 8148.

Bebchuk, Lucian Arye, and Hart, Oliver (2001): “Takeover Bids vs. Proxy Fights in Contests for Corporate Control”, NBER Working Paper Series.

---

Bergstrom, C., Hochfelt, P., Macey, J.R. and Samuelsson, P. (1995): "The Regulation of Corporate Acquisitions: A Law and Economics Analysis of European Proposal for Reform", Columbia Law Review.

Bergstrom, Clas, Peter Hogfeldt, and Johan Molin (1997): "The Optimality of the Mandatory Bid Rule", Journal of Law, Economics, and Organization 13, 433-51.

Bhide, Amar (1993): "The Hidden Costs of Stock Market Liquidity", Journal of Financial Economics 34, 31-51.

Black, B. S. (1990): "Shareholder Passivity Reexamined", Michigan Law Review 89, 520.

Bolton, Patrick, and Ernst-Ludwig von Thadden (1998): "Liquidity and Control: A Dynamic Theory of Corporate Ownership Structure", Journal of Institutional and Theoretical Economics 154, 177-211.

Bolton, Patrick, and Ernst-Ludwig von Thadden (1998): "Blocks, Liquidity, and Corporate Control", Journal of Finance 53, 1-25.

Bradley, M. (1980): "Interfirm Tender Offers and the Market for Corporate Control", Journal of Business, 53, 345-376.

Bulow, Jeremy, Ming Huang, and Paul Klemperer (1999): "Toeholds and Takeovers", Journal of Political Economy 107, 427-54.

Burkart, Mike (1995): "Initial Shareholdings and Overbidding in Takeover Contests", Journal of Finance. 50(5), 1491-1515.

Burkart, Mike, Denis Gromb, and Fausto Panunzi (1998): "Why Higher Takeover Premia Protect Minority Shareholders", Journal of Political Economy 106, 172-204

---

Burkart, M., and F. Panunzi (2000): “Agency Conflicts, Ownership Concentration, and Legal Shareholder Protection”, Stockholm School of Economics, Stockholm.

Burkart, Mike, Denis Gromb, and Fausto Panunzi (2005): “Minority Blocks and Takeover Premia”, ECGI Press, Finance Working Paper # 96.

Cadsby, C.Bram and Maynes, Elizabeth (1998): “Corporate Takeovers in the Laboratory when Shareholders Own More than One Share”, University of Guelph Working paper 1998-3.

Caprasso, J. N. and Setareh, S. (1998): “Corporate Governance Survey”, European Business Law Review.

Carney, W.J. (1997): “Federalism and Corporate Law: A Non-Delaware View of the Results of Competition in: International Regulatory Competition and Coordination – Perspectives on Economic Regulation in Europe and the United States”, Clarendon Press.

Cheffins, B.R. (1999): “Current Trends in Corporate Governance: Going from London to Milan via Toronto”, Duke Journal of Comparative & International Law

Chowdhry, B. and N. Jegadeesh (1994): “Pre-Tender Offer Share Acquisition Strategy in Takeovers”, Journal of Financial and Quantitative Analysis, Vol 29, #1, pp. 117-130.

Coffee, John C. (1991): “Liquidity versus Control: The Institutional Investor as Corporate Monitor”, Columbia Law Review 91, 1277-1366.

Coffee, John C. (2000): “The Direction of Corporate Law: The Scholars’ Perspective”, Delaware Journal of Corporate Law

Dewatripont, M. (1993): “The ‘Leading Shareholder’ Strategy, Takeover Contests and Stock Price Dynamics”, European Economic Review 37, 983-1004.

Dessi, Roberta (2005): "Start-up Finance. Monitoring and Collusion", The RAND Journal of Economics, vol. 36, p. 255-274.

Fishman, M. (1988): "A Theory of Preemptive Takeover Bidding", The Rand Journal of Economics, 19(1), pp.88-101.

Forstinger, Christin M. (2002): "Takeover Law in the EU and the USA: A Comparative Analysis", Kluwer Law International.

Franks, Julian, and Colin Mayer (1997): "Corporate Ownership and Control in the U.K., Germany and France in: Studies in International Corporate Finance and Governance Systems", Oxford University Press

Gilson, R. (1981): "A Structural Approach to Corporations: The Case Against Defensive Tactics in Tender Offers", Stanford Law Review 33.

Gilson, R. (1992): "The Political Ecology of Takeovers: Thoughts on Harmonizing the European Corporate Governance Environment", 61 Fordham Law Review 161.

Gromb, Denis (1997): "Is One Share - One Vote Optimal?", Discussion Paper, MIT

Grossman, Sanford, and Oliver Hart (1980): "Takeover Bids, the Free-Rider Problem and the Theory of the Corporation", Bell Journal of Economics 11, 42-64.

Grossman, Sanford J., and Oliver D. Hart (1988): "One Share-One Vote and the Market for Corporate Control", Journal of Financial Economics.

Hansmann, Henry and Kraakman, Reinier (2000): "The Anatomy of Corporate Law: A Comparative and Functional Approach", Working Paper 16f

---

Harris, Milton, and Artur Raviv (1988): "Corporate Control Contests and Capital Structure", *Journal of Financial Economics* 20, 55-86.

Harris, Milton, and Artur Raviv (1988): "Corporate Governance: Voting Rights and Majority Rules", *Journal of Financial Economics* 20, 203-35.

Hart, Oliver (1988): "On SEC's One-share-one-vote Decision", *Wall Street Journal* (July 14, 1988)

Hirschman, Albert O. (1970): "Exit, Voice, and Loyalty; Responses to Decline in Firms, Organizations, and States", Harvard University Press, Cambridge, Mass.

Hirshleifer, David (1995): "Mergers and Acquisitions: Strategic and Informational Issues", *Handbooks of Operations Research and Management Science* (Elsevier, Amsterdam).

Hirshleifer, D. and I.P.L. Png (1989): "Facilitation of Competing Bids and the Price of a Takeover Target", *The Review of Financial Studies*, 2(4), pp. 587-606

Hirshleifer, David, and Sheridan Titman (1990): "Share Tendering Strategies and the Success of Hostile Takeover Bids", *Journal of Political Economy* 98, 295-324.

Holmstrom, Bengt, and Barry Nalebuff (1990): "To the Raider Goes the Surplus: A Reexamination of the Free-rider Problem", *Journal of Economics and Management Strategy*, (1)1.

Holmstrom, Bengt, and Jean Tirole (1993): "Market Liquidity and Performance Monitoring", *Journal of Political Economy* 101, 678-709.

Jenkinson, T. and Mayer, C. (1994): "Hostile Takeovers", McGraw-Hill.



---

Jensen, M. (1998): "Takeovers: Their Causes and Consequences", *The Journal of Economic Perspectives*, 2.

Jensen, Michael C., and William H. Meckling (1976): "Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure", *Journal of Financial Economics* 3, 305-60

Jensen, Michael C., and Richard S. Ruback (1983): "The Market for Corporate Control: The Scientific Evidence", *Journal of Financial Economics* 11, 5-50.

John, Kose, and Simi Kedia (2000): "Design of Corporate Governance: Role of Ownership Structure, Takeovers, Bank Debt and Large Shareholder Monitoring", *Stern School of Business, Department of Finance, Working paper #48*.

Kahn, Charles, and Andrew Winton (1998): "Ownership Structure, Speculation, and Shareholder Intervention", *Journal of Finance* 53, 99-129.

Kenyon-Slade, Stephen (2003): "Mergers and Takeovers in the US and UK: Law and Practice", *Oxford University Press*.

Kyle, A. And J.L. Vila (1991): "Noise Trading and Takeovers", *Rand Journal of Economics*, vol. 22 #1.

La-Porta, Rafael (1998): "Law and Finance", *Journal of Political Economy* 106, 1113-55.

Lipton, Martin, and Rowe, Paul K. (2001): "Pills, Polls and Professors: A Reply to Professor Gilson", *Working paper #CLB-01-006, New York University*

Maug, Ernst (1998): "Large Shareholders as Monitors: Is There a Trade-off between Liquidity and Control?", *Journal of Finance* 53, 65-98.

---

Mayer, Colin (1988): “New Issues in Corporate Finance”, *European Economic Review* 32, 1167-83.

Mayer, Colin (2000): “Ownership Matters”, Said Business School, University of Oxford, Oxford University Press.

McCahery, J. and L. Renneboog (2002): “Recent developments in corporate governance”, in J. McCahery, P. Moerland, T. Raaijmakers and L. Renneboog (eds.): “Corporate governance regimes: convergence and diversity”, Oxford University Press, Oxford.

Ravid, S. Abraham and Spiegel, Matthew I. (1999): “Toehold Strategies, Takeover Laws And Rival Bidders”, Yale ICF Working Paper No. 99-05; New York University, Center for Law and Business, Working Paper No. 98-024.

Roe, Mark J. (1994): “Strong Managers, Weak Owners: The Political Roots of American Corporate Finance”, Princeton University Press, Princeton, N.J.

Scharfstein, David (1988): “The Disciplinary Role of Takeovers”, *Review of Economic Studies* 55, 185-99

Schmid, J. (1996): “German Cost-Cutter Opts for Peace, Daimler-Benz Chief Plays Down “Shareholder Value””, *International Herald Tribune*, November 1996.

Schnitzer, Monika (1995): ““Breach of Trust” in Takeovers and the Optimal Corporate Charter”, *Journal of Industrial Economics* 43, 229-59.

Seligman, Joel (1986): “Equal Protection in Shareholder Voting Rights : The One-Share-One-Vote Controversy”, *George Washington Law Review* 54, 687.

---

Shleifer, Andrei, and Lawrence H. Summers (1988): ““Breach of Trust” in Hostile Takeovers”” in Alan J. ed Auerbach, ed.: “Corporate Takeovers: Causes And Consequences”, University of Chicago Press, National Bureau of Economic Research Project Report series, Chicago and London

Shleifer, Andrei, and Robert W. Vishny (1986): “Large Shareholders and Corporate Control”, *Journal of Political Economy* 94, 461-88.

Shleifer, A. and Vishny, R. (1988): “Value Maximization and the Acquisition Process”, *The Journal of Economic Perspectives*, 2.

Shleifer, Andrei, and Robert W. Vishny (1989): “Equilibrium Short Horizons of Investors And Firms”, *American Economic Review* 80 (2), 148-153.

Singh,R. (1995): “Takeover Bidding with Toeholds: the Case of the Owner’s Curse” working paper, Washington University, 1995.

Stein, Jeremy C. (1988): “Takeover Threats and Managerial Myopia”, *Journal of Political Economy* 96, 61-80.

Stein, Jeremy C. (1989): “Efficient Capital Markets, Inefficient Firms: A Model of Myopic Corporate Behavior”, *Quarterly Journal of Economics* 104, 655-69.

Stith, C. (1991): “Federalism and Company Law: A Race to the Bottom in the European Community”, *Georgetown Law Journal*.

Tirole, Jean (1986): “Hierarchies and Bureaucracies: On the Role of Collusion in Organizations,” 2 *Journal of Law, Economics, & Organization* 181–214.

Tirole, Jean (1986): “Procurement and Renegotiation”, *Journal of Political Economy*, University of Chicago Press, vol. 94(2), pages 235-59, April.

---

Weigand, J. (1999): “Does the Governed Corporation Perform Better? Governance Structures and Corporate Performance in Germany (with Erik Lehmann)”, *European Finance Review* 4, Issue 2.

Wymeersch, E. (1998): “A Status Report on Comparative Corporate Governance Rules and Practices in some Continental Europe States” in “Comparative Corporate Governance – The State of Art and Emerging Research”, Hopt, K, et al eds.

Wymeersch, E. (2001): “Current Company Law Reform, Initiatives in OECD Countries – Challenges and Opportunities, Financial Law Institute”, Working Paper Series, University of Gent.

Zingales, Luigi (1994): “The Value of the Voting Right: A Study of the Milan Stock Exchange Experience”, *Review of Financial Studies* 7, 125-48.

Zwiebel, Jeffrey (1995): “Block Investment and Partial Benefits of Corporate Control”, *Review of Economic Studies* 62, 161-85.

---

## Appendix 1

9. A conditional offer is one that binds only if the raider gains control by having more than a specified percentage of the shares tendered

13. These amendments raise the majority rule above 50% in the event of a hostile takeover.

14. Staggered boards are a common defense designed to postpone the time at which the raider can gain full control of the board after a takeover. With only a fraction  $y$  of the board renewable every  $x$  years, the raider would have to wait up to  $x/2y$  years before gaining over 50% of the seats

15. Ruling out two-tier tender offers - offers specify a higher price for the first  $n$  shares tendered than for the remaining ones. They tend to induce shareholders to tender and, hence, facilitate the takeover. Such offers are generally illegal in the U.S., but when they are not companies can ban them by writing an amendment into the corporate charter

16. Most poison pills give the right to management to issue more voting shares at a low price to existing shareholders in the event that one shareholder owns more than a fraction  $x$  of outstanding shares. Such clauses, when enforced, make it virtually impossible for a takeover to succeed. When such a defense is in place the raider has to oust the incumbent board in a proxy fight and remove the pill. When the pill is combined with defenses that limit the raider's ability to fight a proxy fight – for example a staggered board – the raider effectively has to bribe the incumbent board

18. A golden parachute is a clause (or several) in an executive's employment contract specifying that they will receive certain large benefits if their employment is terminated. Sometimes it is only in the case that the company is acquired and the executive's

employment is terminated as a result, but not always. These benefits can be severance pay, cash bonuses, stock options or a combination of the items.

19. Entrenchment is a possible description of the actions of managers of firms. Managers can make investments that are more valuable under themselves than under alternative managers. Those investments might not maximize shareholder value. So shareholders have a moral hazard in contracting with managers.

20. It is an event that may occur when opposition develops to a corporation management among its stockholders. Corporate activists may attempt to persuade shareholders to use their proxy votes (i.e. votes by one individual or institution as the authorized representative of another) to install new management for any of a variety of reasons.